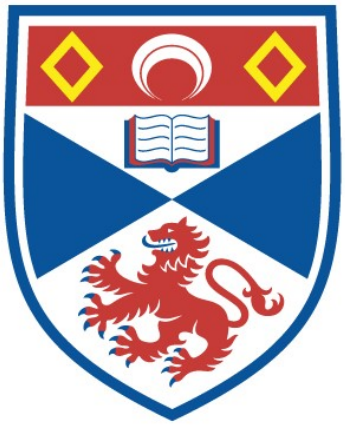
"I WASNAE ON ANYONE'S LIST FOR HAEING A HEART ATTACK. I THOUGHT I WIS BULLET PROOF!" UNDERSTANDING MEN'S AND WOMEN'S EXPERIENCES OF AND THEIR RESPONSES TO HEART ATTACK AND RECOVERY IN POST-INDUSTRIAL FIFE, SCOTLAND.

Sarah McGarrol

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



2014

# "I wasnae on anyone's list for haeing a heart attack. I thought I wis bullet proof!" Understanding men's and women's experiences of and their responses to heart attack and recovery in post-industrial Fife, Scotland.

A thesis submitted to the University of St Andrews for the Degree of

Doctor of Philosophy

**Sarah McGarrol**

School of Geography and Geosciences

University of St Andrews

April 2014

# Declaration

**Candidate's declarations:**

I, Sarah McGarrol, hereby certify that this thesis, which is approximately 80,000 words in length, has been written by me, or principally by myself in collaboration with others as acknowledged, and that it has not been submitted in any previous application for a higher degree.

I was admitted as a research student in October, 2007 and as a candidate for the degree of PhD in September, 2008; the higher study for which this is a record was carried out in the University of St Andrews between 2007 and 2014.

Date signature of candidate

**Supervisor's declaration:**

I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of PhD in the University of St Andrews and that the candidate is qualified to submit this thesis in application for that degree.

Date signature of supervisor

**Permission for electronic publication:**

In submitting this thesis to the University of St Andrews I understand that I am giving permission for it to be made available for use in accordance with the regulations of the University Library for the time being in force, subject to any copyright vested in the work not being affected thereby. I also understand that the title and the abstract will be published, and that a copy of the work may be made and supplied to any bona fide library or research worker, that my thesis will be electronically accessible for personal or research use unless exempt by award of an embargo as requested below, and that the library has the right to migrate my thesis into new electronic forms as required to ensure continued access to the thesis. I have obtained any third-party copyright permissions that may be required in order to allow such access and migration, or have requested the appropriate embargo below.

The following is an agreed request by candidate and supervisor regarding the electronic publication of this thesis:

Access to all of printed copy but embargo of all of electronic publication of thesis for a period of 2 years on the following grounds as publication would preclude future publication;

Signature of candidate Signature of supervisor Date

# Abstract

Coronary heart disease (including heart attacks) is a major cause of mortality and morbidity and within the UK the highest rates of CHD are observed in Scotland. Geographical health inequalities are observed for CHD and this continues to be a policy priority for government. Place effects exist for understanding health variations but there is uncertainty about how place shapes lives and influences individual behaviour.This mixed methods thesis evolved from a largely quantitative study initially interested in measuring geographical variations of CHD outcomes in Fife, to a primarily qualitative study. Fifty participants were interviewed to illuminate how they constructed their heart attack and recovery experiences. Recovery from the heart attack was explored in relation to cardiac rehabilitation, a programme designed to improve health after heart attack. Additionally, interviews were conducted with eight NHS Fife cardiac staff involved in cardiac rehabilitation. Often research into CHD (and heart attack) has primarily focused on symptoms, risk factors and treatment and there is a limited amount of qualitative research exploring men's and women's experiences of heart attacks and/or recovery in place. Experiences of and responses to heart attack take place within the wider social contexts where people live their lives, therefore it was important to situate these experiences in and through place. Places are socially constructed and beliefs about health, ill health and heart attacks are influenced by social, historical and local contexts. The findings indicated that a heart attack is an often disruptive experience with physical, emotional and psychological consequences. Participants attempted to 'make sense' of their heart attack in myriad ways and the impact and consequences which the heart attack produces for participants' day to day lives suggested that heart attack and recovery are experienced in different ways for men and women from different social locations in Fife. Additionally, places produce opportunities and obstacles for health, ill health and recovery and specific barriers to engagement with cardiac rehabilitation were found including organisational, infrastructural, situated and gendered experience factors. This thesis explores the complex interaction between gender, health and place with regards to how heart attack experiences and recovery are influenced and shaped within Fife, Scotland.

# Table of contents

**ABSTRACT** ..... **I**

**TABLE OF CONTENTS** ..... **II**

**LIST OF TABLES** ..... **VI**

**LIST OF FIGURES** ..... **VII**

**LIST OF MAPS** ..... **VIII**

**LIST OF ABBREVIATIONS** ..... **IX**

**ACKNOWLEDGEMENTS** ..... **X**

**CHAPTER 1: INTRODUCTION** ..... **1**

INTRODUCTION ..... 1

FRAMING THE STUDY ..... 2

BACKGROUND TO THE STUDY ..... 5

RESEARCH AIM AND QUESTIONS ..... 8

STRUCTURE OF THESIS ..... 9

**CHAPTER 2: LITERATURE REVIEW** ..... **12**

INTRODUCTION ..... 12

NEIGHBOURHOODS AND HEALTH ..... 13

UNDERSTANDING CAUSES OF CORONARY HEART DISEASE ..... 17

BIOMEDICAL AND SOCIAL CONSTRUCTIONS OF HEALTH AND ILL HEALTH ..... 21

SOCIAL THEORY AND BOURDIEU ..... 23

GENDER AND HEALTH ..... 25

LAY PERSPECTIVES ON HEALTH AND ILLNESS ..... 28

LAY PERSPECTIVES AND CORONARY HEART DISEASE ..... 31

EXPERIENCES OF HEART ATTACK ..... 32

EXPERIENCES OF RECOVERY ..... 40

FRAMING CARDIAC REHABILITATION ..... 40

CONCLUSION ..... 45

**CHAPTER 3: METHODOLOGY** ..... **47**

INTRODUCTION ..... 47

THE METHODOLOGICAL APPROACH ..... 47

*The evolving research* ..... *47*

THE QUALITATIVE METHODOLOGY ..... 51

PREPARATIONS FOR CONDUCTING THE RESEARCH ..... 53

*Ethical procedures and ethical considerations* ..... *53*
*Emotional risk* ..... *56*
*Informed consent* ..... *56*
*Confidentiality* ..... *58*
*Researcher safety* ..... *58*
PARTICIPANT RECRUITMENT AND CONDUCTING THE RESEARCH ..... 59
*Staff recruitment* ..... *59*
*Undertaking the staff interviews* ..... *60*
*Patient participant recruitment* ..... *60*
*Inclusion and exclusion criteria* ..... *65*
*Recruiting patient participants* ..... *66*
*Challenges with patient participant recruitment* ..... *67*
THE INTERVIEWS ..... 68
*Devising the interview schedule* ..... *68*
*The pilot patient interviews* ..... *69*
*Interviewing patient participants* ..... *70*
METHODS OF QUALITATIVE DATA ANALYSIS ..... 72
*Transcribing and coding* ..... *72*
CONCLUSION ..... 76

**CHAPTER 4: ACCOUNTING FOR PLACE IN HEALTH GEOGRAPHY: EXPLORING CORONARY HEART DISEASE IN FIFE ..... 78**

INTRODUCTION ..... 78
(DE)-INDUSTRIALISED PLACES AND HEALTH EFFECTS ..... 79
ACCOUNTING FOR PLACE IN FIFE: INDUSTRIAL CLASSIFICATIONS AND MAPPING ..... 84
REVEALING FIFE'S INDUSTRIAL HERITAGE ..... 91
*Mining* ..... *92*
*Social and cultural characteristics of mining communities* ..... *93*
*Industrial decline and the Miner's Strike (1984-5)* ..... *94*
*Manufacturing* ..... *96*
*Shipbuilding* ..... *98*
*Fishing and agriculture* ..... *99*
*The "new town" - Glenrothes* ..... *100*
CONNECTING PEOPLE AND PLACES IN FIFE ..... 102
*Participants' experiences of place* ..... *103*
CONCLUSION ..... 115

**CHAPTER 5: EXPLORING MEN'S AND WOMEN'S CONSTRUCTIONS OF THEIR EXPERIENCES OF HEART ATTACK ..... 117**

INTRODUCTION ..... 117
DISRUPTION TO THE SELF ..... 118
MAKING SENSE OF THE EXPERIENCE ..... 123
*Identifying heart attack symptoms and responses ..... 123*
MAKING SENSE OF THE EXPERIENCE ..... 139
*Understanding 'cause' ..... 139*
MAKING SENSE OF THE EXPERIENCE ..... 146
*Understanding 'lifestyle' ..... 146*
IMPACT AND CONSEQUENCES OF THE HEART ATTACK ..... 153
CONCLUSION ..... 162

**CHAPTER 6: RECOVERY IN PLACE ..... 164**

INTRODUCTION ..... 164
RECOVERY IN PLACE: COMPARING 'DEPRIVED' AND 'AFFLUENT' PLACES ..... 166
SITUATING 'LIFESTYLES' IN SOCIALLY CONTRASTING PLACES ..... 170
RESPONSES TO RECOVERY: CARDIAC REHABILITATION IN FIFE ..... 176
BARRIERS TO ENGAGEMENT WITH CARDIAC REHABILITATION ..... 178
*Organisational barriers: provision of information ..... 178*
*Surgical interventions and 'fixing' the body ..... 184*
*Infrastructural barriers ..... 190*
*Situated and gendered recovery experiences ..... 193*
CONCLUSION ..... 197

**CHAPTER 7: STAFF PERSPECTIVES ABOUT RECOVERY FROM HEART ATTACK AND BARRIERS TO ENGAGEMENT WITH CARDIAC REHAB ..... 199**

INTRODUCTION ..... 199
CONTEXTUALISING CARDIAC REHABILITATION IN NHS FIFE FROM STAFF PERSPECTIVES ..... 200
STAFF PERSPECTIVES OF BARRIERS TO ENGAGEMENT WITH CARDIAC REHABILITATION ..... 203
*Organisational barriers: provision of information ..... 203*
*'Selling' cardiac rehabilitation ..... 205*
*Infrastructural barriers ..... 210*
*Composition of Phase 3 classes ..... 211*
*Situating patients' recovery in place: contrasts between 'deprived' and 'affluent' ..... 212*
IMPROVING ENGAGEMENT AT CR: STAFF PERSPECTIVES ..... 221
CONCLUSION ..... 223

**CHAPTER 8: DISCUSSION AND CONCLUSION ..... 225**

**THE MAIN FINDINGS: ..... 226**

*Geography of health variations and accounting for place ..... 226*

*Men's and women's experiences of heart attack and recovery ..... 228*

*Recovery in place ..... 233*

*Responses to cardiac rehabilitation ..... 235*

**CONCLUSION ..... 240**

*Sampling ..... 240*

*Content of the interviews ..... 241*

*Interpretation of the data ..... 241*

*Reflections ..... 242*

*Implications of the research ..... **Error! Bookmark not defined.***

**REFERENCES: ..... 247**

APPENDIX 1 UTREC (ETHICS) APPROVAL LETTER ..... 271

APPENDIX 2 NHS ETHICS APPROVAL LETTER ..... 272

APPENDIX 3 LETTER OF ACCESS ..... 273

APPENDIX 4 LETTER OF INVITATION FOR PATIENT PARTICIPANTS ..... 274

APPENDIX 5 INFORMATION SHEET FOR PATIENT PARTICIPANTS ..... 275

APPENDIX 6 CONSENT FORM FOR PATIENT PARTICIPANTS ..... 276

APPENDIX 7 LETTER OF INVITATION FOR STAFF PARTICIPANTS ..... 277

APPENDIX 8 INFORMATION SHEET FOR STAFF PARTICIPANTS ..... 278

APPENDIX 9 CONSENT FORM FOR STAFF PARTICIPANTS ..... 279

APPENDIX 10 PARTICIPANT PSEUDONYMS AND DEMOGRAPHIC INFORMATION ..... 281

APPENDIX 11 PSEUDONYMS FOR CARDIAC REHABILITATION STAFF ..... 285

APPENDIX 12 INTERVIEW SCHEDULE: STAFF PARTICIPANTS ..... 286

APPENDIX 13 INTERVIEW SCHEDULE: PATIENT PARTICIPANTS ..... 288

APPENDIX 14 PARTICIPANT OCCUPATION CATEGORIES ..... 295

APPENDIX 15 ATTENDANCE AT NHS FIFE CARDIAC REHABILITATION (2007): (NHS FIFE, 2008) ..... 296

# List of tables


Table 1 Projected patient participant sample

Table 2 Final sample of patient participants

Table 3 Male participants: attenders

Table 4 Male participants: non-attenders

Table 5 Female participants: all attenders and non-attenders

Table 6 Timetable of the PhD research process

# List of figures

Figure 1 Royal College of Nursing principles of Informed Consent

Figure 2 Principles of Grounded Theory

Figure 3 CHD mortality by industrial area in Fife

# List of maps


Map 1 Industrial classification areas across Scotland

Map 2 Participants' locations and deprived/non-deprived areas in Fife

Map 3 Patient participants' 'industrial' locations in Fife

# List of abbreviations

| | |
|---|---|
| AMI | Acute Myocardial Infarction (heart attack) |
| BACR | British Association for Cardiac Rehabilitation |
| BACPR | British Association for Cardiovascular Prevention and Rehabilitation |
| BHF | British Heart Foundation |
| CABG | Coronary Artery Bypass Grafting |
| CHD | Coronary Heart Disease |
| CR | Cardiac Rehabilitation |
| GIS | Geographic Information System |
| ISD | Information Services Division (Scottish Government) |
| MCN | Managed Clinical Network |
| NHS Fife | National Health Service, Fife. |
| NICE | National Institute for Health and Clinical Excellence |
| PCI | Percutaneous Coronary Intervention (also known as coronary angioplasty) |
| R&D | Research and Development |
| SIGN | Scottish Intercollegiate Guideline Network |
| SIMD | Scottish Index of Multiple Deprivation |
| STEMI | ST segment Elevation Myocardial Infarction |
| WHO | World Health Organisation |

# Acknowledgements

This thesis could not have been completed without the support and involvement of a variety of people. I am extremely grateful to my academic supervisors, Professor Chris Dibben and Dr Mike Kesby who offered valuable advice, support and encouragement.

Thanks to NHS Fife Managed Clinical Network for Coronary Heart Disease in conjunction with Dr Mark Francis, for funding this PhD. I am grateful to numerous staff in NHS Fife who aided me to gain the various approvals for conducting the research and who gave up their time to meet me and to discuss ideas about the research. I am indebted to members of the cardiac rehabilitation team across NHS Fife who not only participated in the research but who provided ideas and 'insider knowledge' about cardiac rehabilitation and the Fife population.

Very special thanks to VB who recruited participants on my behalf and who was always willing to have a "blether" and provide support and encouragement.

Thanks are extended to fellow PhD-ers (particularly, FH, VH, ST, SP, TC, DS and SS) and post-docs (LW, XF and DM) in the School of Geography and Geosciences, as well as the admin and technical staff who helped the project (and me) along the way. I am also grateful to Dr Ed Hall at the School of the Environment, University of Dundee.

Thank you to all my friends, near and far, who have provided ears to talk to, words of encouragement, coffee (and cake) breaks and nights out throughout the course of the PhD.

A big, big thank you to my family who have kept me (mostly) sane and provided support throughout the PhD. Special thanks to my sisters Eve and Marie, my wee nephew Oliver, cousin Lesley, auntie Anna (editor extraordinaire), and uncle Roger.

I dedicate this PhD to my mum, Isobel McGarrol, with heartfelt gratitude, hugs and kisses. She has supported me in ways too numerous to mention throughout the course of this PhD. I am extremely grateful to her for her unwavering trust and confidence in me, especially when mine was wobbling! Thank you so much, Mum. Xxx

My sincerest appreciation and thanks to all the participants who took part, and to those who kindly welcomed me into their homes to share their personal experiences so candidly and graciously. Without their contributions, there would be no thesis.

This is also respectfully dedicated to those patient participants who have since died; and in loving memory of my Grannie and Grandma - Mrs Hilda McCann and Mrs Mina McGarrol.

# Chapter 1: Introduction

## Introduction

This thesis explores men's and women's experiences of their heart attack and recovery. This research was funded by NHS Fife Managed Clinical Network (MCN) for Coronary Heart Disease. The initial remit of the project was to understand in greater detail geographical health variations and health inequalities across NHS Fife, particularly related to coronary heart disease. During the preliminary research planning and consultation meetings with NHS Fife MCN, cardiac rehabilitation was identified as a clinical priority area for NHS Fife, but one which was not often researched from a geographical or community perspective. Throughout the initial stages of the research and during multiple discussions with NHS Fife staff working in the broad area of coronary heart disease, the research narrowed to focus on patient's experiences of heart attack and recovery in place, taking a distinctly NHS cardiac rehabilitation focus on recovery. This research was conducted within the context of post-industrial Britain and in particular, within the region of Fife, located in the east of Scotland. An important component of this research is situating men's and women's experiences of heart attack and recovery in and through place. This thesis attempts to explore the complex and co-constituted interactions between place, gender and health. It is important to highlight that in this thesis, the research evolved from understanding place as largely the geography of health variations (using quantitative methods) through to understanding the geography of experience of heart attack and recovery in place (using qualitative methods).

Fifty men and women who had sustained a heart attack were interviewed in their homes. In addition, eight cardiac rehabilitation staff members tasked with delivering, organising and developing cardiac rehabilitation services for heart attack patients in Fife were interviewed. National data highlights that cardiac rehabilitation services have issues of engagement and attendance and this was highlighted as problematic in NHS Fife. Indeed, cardiac rehabilitation engagement showed geographical variation in Fife and under-represented groups who were not attending were identified as contributing to this

variation. Therefore, both patient participants' and staff perspectives about heart attack experiences, recovery and barriers to engagement were sought.

This introductory chapter will be structured in the following way. The first part will briefly frame the study. The second part will outline the background to the study, in particular collaboration with the NHS. The third part will highlight the research aim and research questions which this thesis seeks to address. Finally, the chapter will conclude with an outline of the structure of the remaining thesis chapters.

## Framing the study

The thesis draws together a variety of components to understand the complex interaction between place, gender and health for heart attack experiences and recovery. Coronary heart disease (CHD) including heart attack, is an important issue to study because it is a significant health problem in the UK and Scotland. Scotland has a poor reputation with regard to ill health and CHD (including heart attacks) contributes to this status. Within Scotland, there is substantial geographical variation of health with post-industrial areas regularly showing poorer health for a variety of outcomes including coronary heart disease (and heart attacks) and there has been significant interest in understanding the ways place affects the health of inhabitants. It has been established that health outcomes tend to be worse in the most socio-economically deprived groups with health improving relative to affluence (Ellaway et al., 2001; Macintyre et al., 2002). Much of the 'neighbourhoods effects' research has used quantitative approaches and has most often shown that living in deprived places has a negative effect over and above the effect of individual characteristics (e.g. see van Ham and Manley, 2012). For example, various theories have been proposed to account for poorer health in Scotland and there is evidence of a 'Scottish Effect' whereby high levels of mortality and ill health are evident but cannot be explained solely by socio-economic factors (Scottish Government, 2010).

Place matters for health but there are ambiguities about *how* places shape health. A critique of quantitative studies of neighbourhood effects is that more often than not correlations are made between area characteristics rather than providing causal

explanations. Therefore understanding characteristics of place and how these can influence and shape health, ill health and recovery was an important component of this research. There is frequently a lack of clarity around how places influence individual behaviour and the wider context where lives are lived is not often considered in health research, particularly research related to heart attack and recovery. Understanding how place shapes health and ill health necessitated the use of mixed methods to highlight different geographical and socio-historical characteristics of places in Fife which may shape health. These are often lacking in biomedical and quantitative health geography understandings of health variations (Kearns, 1993; Jones and Moon, 1993). Responding to these geographical health inequalities, health policies have attempted to make sense of the processes which produce health inequalities. For example, within health geography one of the questions has been - are variations due to the social and material circumstances of individuals who happen to live in particular places (composition) or are they related to the specific characteristics of the place itself, for example the social, cultural, material, environmental or political influences, termed contextual factors? (Gatrell et al., 2004; Gatrell & Elliot, 2009). However, it is more likely that both compositional and contextual factors influence health outcomes (Macintyre et al., 2002; Frohlich et al., 2001). What has become apparent is that these types of quantitative enquiry alone cannot provide the intensive exploration needed to enable insights into how these elements, nuanced and particular to local areas, influence health. Nor can these methods provide insights into 'lay perspectives' of heart attack experience and recovery. Thus, this thesis sought to explore how individuals constructed and made sense of their heart attack experiences and recovery in place. Few studies have sought to understand and explore the lived experience of those who have sustained a heart attack, although there are a number of exceptions (Wiles & Kinmouth, 2001; Kristofferzon et al., 2007; Hutton & Perkins, 2008; Medved & Brockmeier, 2011). This may in part be due to the prevailing focus on population data and biomedical and epidemiological evidence for understanding CHD (Wiles, 1998; White, 1999). Men's and women's experiences of and responses to heart attack are influenced by biomedical, social and gendered constructions of heart attack which can create, enhance or exacerbate variations, not only in how men and women understand their heart attack but also in how they respond to it. These experiences and responses also occur in neighbourhoods where people live

their lives and this research endeavours to better situate and locate these experiences and responses in and to different social locations in Fife.

Fife, where this research was situated, is an interesting place to study as there are many contrasts between areas. In the case of this research, the legacies left by de-industrialisation have resulted in a region demonstrating marked health differences between places of wealth and places of poverty and deprivation. Research which explored historical and contemporaneous effects of de-industrialisation within Scotland and other parts of the UK, have highlighted that, in various ways, changes to the social, economic and physical environments of these areas have combined to produce the conditions which can lead to poor health (Riva et al., 2011; IDeA, 2010; Walsh et al., 2010; Dorling et al., 2001; Mitchell et al., 2000; Phillimore and Morris, 1991; Phillimore, 1993; Phillimore et al., 1994). Phillimore (in Platt et al (eds)., 1993: 175) highlighted that understanding the "local peculiarity" and character of different places, as well as the characteristics of people in such places would be a better way of capturing the "diverse set of possible influences on health."

Many of these research studies utilised quantitative methods including multi-level modelling to show place effects on health. These studies highlighted high levels of negative health behaviours (such as high alcohol consumption, high smoking rates and poor diets), high levels of unemployment and an overwhelming sense that these areas were continuing to decline. This thesis also initially utilised quantitative approaches for understanding geographical variations of CHD in Fife. By combining data to create area typologies based on previous industries in Fife, places could be better characterised. Using these typologies and combining them with individual CHD outcomes data, geographical variations were shown to exist with de-industrialised areas faring the worst for CHD mortality outcomes. Details of this methodology and the results will be presented in Chapter 4. Places may be categorised through indices (and additionally understood and constructed by people) as 'deprived' or 'affluent', 'unhealthy' or 'healthy', but the ways through which place impacts health and illness requires a more nuanced and sensitive understanding of local contexts which frame participants' experiences of their heart attacks and their recovery. It is argued within this thesis that through exploring (using

qualitative methods) participants' experiences of heart attack and recovery, how places shape health can be better understood.

Social constructions of health and ill health and perspectives about heart attack and recovery show complex interactions between place, gender and health with participants' heart attack experiences and recovery contingent on a number of factors which can combine to produce differential opportunities or obstacles for health and well-being across different places. These factors will be shown to combine and influence interpretations relative to men's and women's experiences which are inextricably linked to the places through which they are produced. Recognising that constructions of health and ill health are complex and often contradictory and enacted in different ways through lifestyles and behaviours, this research draws on Bourdieu's theory of 'habitus' (1990) which can aid explanation of the connections between social structures, cultural systems and individual action in and through place (Williams, 1995). Fusing these elements together can enhance understanding of the structured and situated nature (within different social locations) of participants' heart attack experiences and recovery and illuminate barriers to cardiac rehabilitation engagement. 'Lay perspectives' presented in this thesis will reveal the often shocking and disruptive nature of a heart attack and the uncertainties, contradictions and limitations which it produced in myriad ways for participants. These experiences can differentially impact on recovery and 'getting back to normal' for participants in their day to day lives and these will be explored throughout this thesis.

## Background to the study

This thesis sits within health geography, but the study has also engaged with wider inter-disciplinary work from within social geography, sociology and public health. A key aspect of the study was a focus on experiences of heart attack and recovery and it has been stated that this research was undertaken in collaboration with the Managed Clinical Network for Coronary Heart Disease, NHS Fife. NHS Fife were broadly interested in understanding health inequalities and inequities relevant to coronary heart disease populations across NHS Fife and this study was seen as an opportunity to consider

geographical aspects of CHD in closer detail which might influence and impact on patient care.

During the preliminary stages of the PhD, the researcher liaised with the NHS Fife Managed Clinical Network (MCN) consultant cardiologist and attended meetings at NHS Fife Health Board headquarters where the NHS Fife Coronary Heart Disease MCN strategy for 2008 – 2013 was in the process of being refined and edited. This document outlined key areas of importance for coronary heart disease services in NHS Fife to be developed and extended during the five year period. Cardiac rehabilitation was one of these key areas. It was understood that within the NHS Fife context, cardiac rehabilitation was an important aspect of coronary heart disease patient recovery, but compared with the focus on surgical procedures such as angioplasty[1] and coronary artery bypass grafting[2] being performed and the increases in statin[3] prescriptions being dispensed outlined in the strategy document (NHS Fife MCN CHD strategy, 2008), cardiac rehabilitation appeared to be a less well researched area within the overall coronary heart disease services for patient care in NHS Fife. For the researcher, a non NHS employee, cardiac rehabilitation seemed to be an important area in which to couch the PhD research, particularly as it takes place at different times post heart attack and across different geographical scales and locations – in hospital, at home and in the community. Demographic variations in those who attend cardiac rehabilitation is evidenced nationally in the UK (Melville et al., 1999; Jackson, et al., 2005; Rees et al., 2005; British Heart Foundation, 2008) with lower

[1] Angioplasty refers to a procedure which restores blood flow to a problematic area of the heart. This procedure involves inserting a 'balloon' catheter into an artery and directing it towards the blockage site. By inflating the balloon, the narrowed artery becomes widened. A stent, which is a small metal coil, is expanded into the artery to keep the widened section open, encouraging blood to flow more freely through the artery.

[2] Coronary artery bypass grafting (CABG) is a technique used when angina (typically felt as tightness, burning or dull pain which may be felt in the arm, abdomen, throat or jaw and often accompanied by breathlessness) is disabling and unlikely to respond to medicines or when the fatty build up in the arteries (atherosclerosis) is severe and threatening all of the main three arteries supplying the heart. The CABG involves bypassing the affected artery with another artery from the chest wall or a vein removed from the patient's leg or arm.

[3] Statins are drugs which can lower high levels of cholesterol in the blood which, if left, can cause a build up of atheroma (fatty, sticky deposits) in the arteries that can increase the likelihood of a heart attack or stroke. Statins are effective in changing the inner lining of the blood vessels making it more difficult for atheroma to form, thus slowing down the progression of coronary heart disease.

levels of engagement observed amongst women (McGee and Horgan, 1992; Cooper at al., 2002) older patients (Pell and Morrison, 1998; Cooper et al., 2002) and those from socially deprived areas (Pell et al., 1996; Melville et al., 1999; Ramm et al., 2001; Cooper et al., 2002; Tod et al., 2001; 2002).

These variations were also reflected within NHS Fife with lack of engagement evidenced across the four phases of cardiac rehabilitation (CR) in Fife (NHS Fife, 2008; see Appendix 15) and staff expressed a desire to understand why certain population groups were less likely to attend. NHS Fife cardiac rehabilitation staff were involved throughout the research and exploring their perspectives, expertise and insights about perceived differences between patients who engage or not with cardiac rehabilitation provided a professional perspective into the complex factors affecting patient health and engagement with health services in NHS Fife. Many of the staff involved in CR had been employed in NHS Fife working with the cardiac population for many years. A number of staff were born and bred in Fife and these socio-cultural understandings of their communities and by extension the patient communities they worked with, was theorised to be able to provide an important and nuanced understanding of the "social creation of health differentials" (Phillimore, 1991).

Cardiac rehabilitation will be further detailed in Chapter 2. Chapter 7 will explore staff's perspectives related to cardiac rehabilitation in detail. A gap which this research addresses is that the cardiac rehabilitation model commonly focuses on 'individual' factors determining engagement. Place based factors which may also be implicated in barriers or facilitators for engagement are often overlooked in the literature and this research is seeking to further explore these gaps (Clark et al., 2005) within cardiac rehabilitation in NHS Fife. Few cardiac rehabilitation studies explore the reasons for non-attendance using qualitative methods and fewer still have explored these reasons through a specific geographical lens mindful of context and area nuances. Few studies have sought to garner the views of staff. This thesis provides a lens through which a number of inter-related and complex threads are presented linking place, gender and health. By exploring how men and women constructed their heart attack experiences in and through place, these act as a tonic to the often de-contextualised and dominant

individually focused, biomedical view of health and illness which often underpins health policies and health programmes, including cardiac rehabilitation. Jones and Moon (1993:515) have stated that "seldom, however, does location itself play a real part in the analysis; it is the canvas on which events happen but the nature of the locality and its role in structuring health status and health behaviour is neglected." This research engages with this by exploring and contextualising Fife through historical geographies, paying particular attention to the characteristics of place in order to better situate men's and women's experiences of their heart attack and recovery.

## Research aim and questions

This thesis aims to make an important contribution to the health inequalities literature within the geography of health and to particularly assert that understanding the complex interactions between place, gender and health for heart attack experiences and recovery are important to better understand contemporaneous variations of CHD and barriers to engagement for cardiac rehabilitation in Fife, Scotland.

The main research aim which this thesis seeks to address is:

- In which ways does place influence and shape experiences of heart attack and recovery for men and women in Fife, Scotland?

The research questions are:

- What observations can be drawn about coronary heart disease outcomes associated with different geographical areas in Fife?

- How do men and women construct their experiences of heart attack?

- What roles do place and gender (and other determinants, such as age) play regarding experiences of heart attack and engagement with cardiac rehabilitation?

- What barriers to engagement with cardiac rehabilitation exist for participants from different areas across Fife?

- What barriers to engagement have cardiac rehabilitation staff identified and additionally, to what extent do they perceive place based factors have a bearing on these?

## Structure of thesis

Chapter Two is the literature review which covers a variety of different strands of research drawing on literature related to place, gender and health with a specific coronary heart disease and recovery focus, including cardiac rehabilitation. This begins by reviewing the 'neighbourhoods effects' literature in order to present how place matters for health. Neighbourhood effects and health research has become policy relevant and a way to understand geographical variations of health which can be seen to exist across a number of different measures and scales. Epidemiological and biomedical literature related to coronary heart disease is reviewed concerning the burden of coronary heart disease for populations and factors for developing coronary heart disease, in particular the role of behavioural risk factors. Attention will then be directed towards the geographical variations of CHD, particularly in Scotland across a variety of scales and ways to understand geographical variations of disease and health inequalities. Limitations of these predominantly quantitative studies will be presented before exploring biomedical and social constructions of health and ill health. Lay perspectives and coronary heart disease literature is reviewed before the small but important qualitative research into men's and women's experiences of heart attack and recovery are critically reviewed. Cardiac rehabilitation will be highlighted towards the end of the review and in addition the small number of qualitative research studies into men's and women's recovery will be discussed. Embedded within the literature review is reference to Bourdieu's social constructivist theory of habitus which provides a link between person and place and wider social structures which can influence and impact health.

Chapter Three describes the design and methodology used within this study. This study is a mixed method study which initially evolved from a quantitative study through to a qualitative study. Justification of the methods chosen is provided in this chapter. The rest of the chapter focuses most specifically on the description of how the qualitative research was undertaken including participant recruitment, data collection, data analyses and ethical and researcher considerations. Further details of the quantitative phase of the study are presented in Chapter 4.

Chapter Four is a chapter which combines a number of different elements to account for place in health geography and for exploring CHD in Fife most specifically. This chapter provides a broader understanding of Fife where this research was situated and presents different ways to account for place in health geography. Results from the quantitative phase of the research are presented and combined with documentary, archival and secondary data and analysis to further explore characteristics of place in Fife. Using data from participant interviews 'place' is further Illuminated. It is argued that place is complex but exploring how it is constructed and perceived can help situate participants' experiences and allow a broader understanding of how and why places may structure and influence health.

Chapter Five explores real life experiences from men and women who have suffered a heart attack. Lay perspectives of health and ill health are crucial to understand as they illuminate the complexity, impact and consequences of a heart attack in everyday life. These accounts took place within the wider social contexts where people live their lives. These experiences can highlight the ways other determinants such as gender and age for example can interconnect to create, enhance or exacerbate differences, not only in how men and women make sense of the heart attack experience, but also how they respond to it. Findings in this chapter are organised around three main themes: disruption to the self, making sense of the experience and the impact and consequences of the heart attack.

Chapter Six re-engages with perceptions of neighbourhoods to explore recovery in place. This chapter explores how places can be constructed as 'healthy' or 'unhealthy' and shape

health experiences in a variety of ways. By situating lifestyles in and through socially contrasting places in Fife, patients' experiences of heart attacks are highlighted. This is of particular significance for recovery and cardiac rehabilitation in particular because social practices and behaviours are highly contingent on social environments. Cardiac rehabilitation by contrast often focuses on 'individual' behaviours rather than on the social production of lifestyle. In addition, barriers to cardiac rehabilitation attendance from participants' perspectives are explored and include organisational, infrastructural and situated and gendered recovery experiences which may influence and affect engagement.

Chapter Seven explores cardiac rehabilitations staffs' perspectives about the cardiac rehabilitation service in Fife and the benefits which staff believe CR can bring for those who have sustained a heart attack. Barriers to engagement will be highlighted and these will include organisational, information and infrastructure issues. In addition, staff perspectives related to place based factors in Fife and the differences these can generate for heart attack experiences, recovery and engagement with CR will be emphasised.

Chapter Eight will discuss the main findings and contribution this thesis has made to understandings of place effects on health, men's and women's heart attack experiences and recovery and barriers to engagement with CR in Fife. The implications these findings have for cardiac rehabilitation will be highlighted and recommendations for improving the CR service in Fife are provided. Limitations of the research and avenues for future geographical health research on heart attack experiences and recovery will be proposed.

# Chapter 2: Literature review

## Introduction

The literature reviewed in this chapter will cover different strands of research which, when combined, will highlight and contextualise how gender, health and place are co-constituted and can contribute to variations in health and ill health, pertaining particularly to coronary heart disease (and heart attacks). Beginning with reviewing the neighbourhood effects literature, it will be argued that there is little doubt that place effects exist, but there is uncertainty about how neighbourhoods shape lives, and the identification of causal pathways between neighbourhood context, and how these spaces influence individual behaviour are not always apparent. The methodological challenges associated with measuring neighbourhood effects are complex and contested (van Ham and Manley, 2012). This literature review will also outline a number of concepts about the body, gender and health from both a bio-medical and social constructivist perspective. Giving credence to 'lay perspectives' on health and ill health, these are reviewed in order to act as a foil to the large body of epidemiological evidence which is used to understand variations in population health for coronary heart disease. The focus of this thesis is on heart attack and recovery in place and this literature review will highlight that compared to epidemiological evidence about coronary heart disease, less attention has been paid to experiences, or 'lay perspectives' of heart attack from men's and women's perspectives. These experiences are embedded within men's and women's wider social contexts, in this case - Fife. Therefore, these contextualised experiences which link place, gender, age and other factors influence and shape perceptions and attitudes towards the heart attack and also towards recovery. Finally, literature related to recovery and in particular, cardiac rehabilitation, will be reviewed and critiqued within this literature review.

## Neighbourhoods and health

There has been a growing interest in how neighbourhoods affect the health of residents (Macintyre et al. 2002; Diez- Roux, 2007). The vast majority of this research has utilised quantitative approaches and suggests that living in neighbourhoods characterised as deprived has a negative effect on residents' life chances over and above the effect of their individual characteristics (e.g. see van Ham and Manley, 2012). Neighbourhood effects have been reported in relation to a number of outcomes, such as educational attainment, social and occupational mobility, deviant behaviour and of prime importance for this research, health (Pickett & Pearl, 2001; Galster, 2012; van Ham et al., 2012). The interest in neighbourhoods and health has largely been driven by a number of inter-related issues within public health and epidemiology. There is a growing realisation that explanations of the causes of ill health based only on individual behaviour or characteristics are inadequate and do not fully explain the determinants of disease. Therefore, there has been recognition that it is important to consider two different, but related things - not only individual characteristics, but also the characteristics of the groups or contexts which individuals belong to in order to understand the distribution of disease. Therefore, neighbourhoods have become important contexts to study because they possess various and varying physical and social attributes (compositional and contextual aspects) which could affect the health of individual residents (Diex- Roux & Mair, 2010; Subramanian & Kawachi, 2006; Kawachi & Subramanian, 2007).

The study of neighbourhood effects and health has become increasingly policy relevant (Diez-Roux and Mair, 2010). In the UK, the publication of the Black Report (1982), the Acheson report (Gordon et al., 1999) and a number of health policy reports produced by the Scottish and UK governments respectively (Scottish Executive (1999; 2003) HM Treasury and Department of Health (2002), House of Commons Health Committee (2009)) have all addressed an aim to reduce health inequalities, through interventions, ensuring equitable access to healthcare and supporting specific groups identified as being vulnerable to health inequalities (Macintrye, 2007). However, despite the volume of work which has been published on neighbourhood effects over the last two decades, there is

still debate about how important neighbourhood effects actually are for a variety of outcomes and the extent to which the evidence generated has shown 'true' causal neighbourhood effects, with the criticism being that existing studies have fallen short of being able to do this (van Ham et al., 2012). As suggested above, many of the studies investigating neighbourhood effects and health have used quantitative methods suited to the study of neighbourhood health effects which include multi-level analyses and the use of Geographic Information Systems (GIS) (Diez-Roux and Mair, 2010). Indeed, much geographical health research has focused on measuring material and social deprivation within and between places using indicators (e.g. unemployment, home ownership, education, income inequality and car ownership) which produce a 'score' for an area and additional information (e.g. health outcomes such as coronary heart disease mortality) can be added. The use of these indices (such as the Carstairs index (Carstairs and Morris, 1989) or Scottish Index of Multiple Deprivation (Scottish Executive, 2006)) can show a relationship between health and place (Shaw et al., 2001; 2002; Gatrell & Elliot, 2009) and when combined with GIS, the examination of 'place' becomes ever more detailed. However, 'neighbourhood' is conceived of as a score, rather than as a network of social relations and interactions or as a context for individuals' lived lives. Nevertheless, the general critique of many quantitative studies of neighbourhood effects is that they often only show correlations between area characteristics, not necessarily causal effects, and may have a number of interpretative limitations. Inferences can be made about the nature and impact of places on health, but these may be inaccurate and based on the 'ecological fallacy' (Schwartz, 1994), drawing assumptions about individuals based on the characteristics of the gross population groups or the areal units on which the data are based. Alternatively, using only individual level data and ignoring the context (e.g. area characteristics) may result in missing important group level effects. This is termed the atomistic fallacy (Alker, 1969). Notwithstanding the challenge of establishing causal relationships, many quantitative studies consistently describe that there is a social gradient in health where health outcomes are worse and most significant from the least to the most deprived socio-economic groups in society. This is well established across a wide variety of health measures such as mortality, long-term illness, health-related behaviour and cardiovascular risk factors (Macintyre et al., 1993; Macintyre, 1994; Ellaway et al., 2001; Macintyre et al., 2002).

The specific disease that this thesis attempts to explain is coronary heart disease (CHD). Statistical data show that around one in five men and one in eight women die from coronary heart disease in the UK (www.nhs.uk/conditions/coronary-heart-disease : accessed 22.08.13) which causes around 82,000 deaths every year. Recent trends of CHD in the UK have shown that death rates have been falling over the last three decades, particularly for those aged over 55, for both males and females (Allender et al., 2008). CHD mortality has declined due in part to reductions in major (modifiable) risk factors, particularly tobacco usage but also, it has been proposed, because treatments and secondary prevention (which include cardiac rehabilitation, surgery and medicines) have explained the remaining decline (NICE, 2007; Unal et al., 2004). However, the rate is not falling as fast in the UK as in other developed nations. Only Ireland and Finland have higher rates than the UK. Scotland, often termed 'The sick man of Europe' with regards to premature death and high mortality rates, especially among adults of working age, has the worst overall health record in the UK (Leon et al., 2002), with CHD contributing significantly to this situation. Indeed, there is increasing evidence of a 'Scottish effect' and a 'Glasgow effect' which identifies that higher levels of mortality and ill health are found in Scotland and on the West coast of Scotland, namely Glasgow, which cannot be explained by socio-economic circumstances alone (Scottish Government, 2010). Within Scotland, however, there is considerable geographical and regional variation with post-industrial areas consistently showing poorer health (Boyle et al., 2004). This thesis will attempt to shift the focus from the West of Scotland to Fife which is a region that is also characterised as de-industrialised, with many of its areas showing poor health outcomes.

Understanding how neighbourhood characteristics may contribute to observed inequalities in health has been a focus in health geography and questions of how best to understand how variations of health are produced and understood has often concerned the role of context and composition in order to account for local variations. (Macintyre et al., 1993; Pickett & Pearl, 2001; Cummins et al., 2007; Flowerdew et al., 2008). The key areas for debate are whether variations are more likely to be due to the social and material circumstances of individuals who happen to live in particular places (composition) or whether variations are also related to specific characteristics of place,

for example contextual factors such as social, cultural, material, environmental or political factors (Gatrell et al., 2004). Compositional factors locate the understanding of variation at the individual level. That is, that population health is composed of the health of individuals and it is assumed that there are no effects of place over and above individual characteristics. Therefore, by knowing the characteristics of individuals, population health differences can be explained (Shaw et al., 2002). Those arguing for contextual factors of health variation suggest that neighbourhood characteristics exert influence on population health. Relevant factors include the physical or natural environment which may be advantageous or deleterious to health (Gatrell, 2002); provision and availability of services (including health care) and sufficient transport links (Kawachi & Berkman, 2003; Ecob and Macintyre, 2000) socio-cultural features of neighbourhoods (including social norms and values; neighbourliness, community spirit and trust) and the reputation of an area (Boyle et al., 2004; Flowerdew et al., 2008). Individuals might differ in their susceptibility to contextual influences on health, or the degree to which contextual influences impact on population health may vary depending on the health outcomes measured and with different populations, from community to community and between areas (Ecob and Macintyre, 2000; Lee and Cubbin, 2002). However, there have been attempts to quantify whether it is context or composition effects which matter most for health variations with the conclusion being that compositional effects are dominant, but also disagreement about whether or not contextual factors have a significant effect (Flowerdew et al., 2008). However, some studies (for example Sloggett and Joshi (1994)) have failed to find an area effect. It has been argued that the distinction between context and composition may be a false one (Macintyre et al., 2002) and that both compositional and contextual factors together influence health outcomes (Frohlich et al., 2001). Teasing out the influence of context and composition is problematic. The difficulty of separating people and places leads to challenges in understanding which is responsible for health – the people or the places or both. Separating them thus causes an unnatural distinction (Tunstall- Pedoe, et al., 2003; MacIntyre, et al., 2002).

## Understanding causes of coronary heart disease

It has been shown that coronary heart disease is a significant health issue in the UK and Scotland. In order to understand this it is necessary to think about the history of the study of CHD. The extensive body of work in modern epidemiology describing the occurrence and distribution of a variety of factors linked to a disease (for example, coronary heart disease) is of key importance in order to understand and respond to health outcomes observed within populations. Variations in population health are displayed for coronary heart disease and regardless of whether mortality or morbidity is measured, disparities within and between countries has been observed for some time. The significance and impact of diseases has led to methods and theories being developed for understanding how inequalities in health (and variations of coronary heart disease in particular) come to pass. Given the extent of the coronary heart disease epidemic and the effect this has for population health, understanding the causes of coronary heart disease, including heart attacks (so that treatment and prevention strategies can be adapted accordingly) has often been informed through large scale epidemiological research (most often conducted in developed nations) which have sought to identify common factors or characteristics which contribute to coronary heart disease.

One of the most well-known and longstanding epidemiological studies is the Framingham Heart Study that began in 1948 in Framingham, Massachusetts, USA, and which recruited a cohort of 5,209 men and women between the ages of 30 and 62. Through this population level monitoring (which also included subsequent generations), the identification of major CHD risk factors was proposed. Indeed, the term 'risk factor' originated from the Framingham heart study and the level of individual risk for developing cardiovascular disease became an integral part of treatment and prevention strategies (www.framinghamheartstudy.org : accessed 2.05.12). These 'risk factors' and associated scoring have been adopted in health policy guidance used internationally for identifying those at risk and to date, underpin the biomedical approach to CHD advice, treatment and prevention (Brindle et al., 2005). Other large scale epidemiological population studies included the WHO **MONICA** (**Moni**toring Trends and Determinants in

**Ca**rdiovascular Disease) project which started in 1989 and had as its main aim the prevention of cardiovascular disease. This multi country collaborative project measured, over ten years, in many different countries, the trends in, and determinants of, cardiovascular disease. Men and women between the ages of 25 and 64 were recruited across 38 centres in 21 countries totalling ten million participants (WHO, 1994; Tunstall-Pedoe et al., 2003).

Further large scale population studies have been undertaken since the MONICA trials, such as the INTERHEART study between 1999 and 2003, all of which were seeking to hypothesise the importance of risk factors for cardiovascular disease (Yusef et al., 2004). Identifying the role risk factors played with regards to mortality for coronary heart disease, it was possible to divide risks into unmodifiable and modifiable factors. The following are unmodifiable risk factors: (1) Genetic risk: individuals with a family history of CHD in either a parent or sibling before the age of 60 can have double the risk of experiencing the disease themselves. (2) Age: cardiovascular risk increases with age and the older an individual becomes, the greater chance of CHD. (3) Gender: Risk is higher in males than females (although this is contested) (Annandale and Hunt, 2000; Pollard, 1999; Macintyre et al., 1996). (4) Ethnicity: for example being of South Asian or Black descent, increases the risk of CHD (Kurian and Cardarelli, 2007; Forouhi and Sattar, 2006). Other risk factors for CHD, established through epidemiological studies, are often seen as being modifiable. Indeed, the World Health Organisation stated that approximately 75% of coronary heart disease can be attributable to modifiable risk factors. These include elevated blood cholesterol and blood pressure, diabetes, smoking, obesity, physical inactivity, diet, excessive alcohol and excessive stress (WHO, 2012; www.heartuk.org.uk: accessed 19.07.12). These modifiable risk factors place emphasis on lifestyle factors (e.g. behaviours) which individuals can mitigate and over which it is suggested that individuals have the power of control so as to change their risk for coronary heart disease (Clarke & van Ameron, 2008). Undoubtedly, these modifiable behavioural risk factors are important and individuals can indeed adjust their behaviours if they have relevant information and education about the risk factors. However, this is contingent on whether individuals perceive themselves to be at risk and if they are empowered to make these changes. However, the fact that individuals *can* modify their behaviour has meant that action to

mitigate risk is often viewed in individualistic terms. This tends to neglect the more social or contextual aspects, which can affect whether a person will act on knowledge if they have it and which can additionally contribute, create and maintain social and geographical inequalities in health. Other risk factors implicated in coronary heart disease include low socio-economic status (material disadvantage), mental ill health and psychosocial stress, all of which have been shown via epidemiological research to damage or protect health respectively. Evidence of how these factors might be implicated in coronary heart disease was shown in the Whitehall studies (Whitehall I and II) which sought to investigate social determinants implicated in coronary heart disease. An inverse correlation between social class measured through employment grades of British civil servants and coronary heart disease was found. Poorer health was observed for those who were employed in lower status jobs and there was strong evidence that employment grade highlighted differences in health behaviours risks, including smoking, diet and exercise, as well as economic circumstances. Additionally, the social environment and circumstances of the participants, both at work and at home, were implicated and these studies attempted to find causal mechanisms in order to explore the pathways by which social position can influence health (Marmot et al., 1991; Marmot, 2003; Lynch et al., 2000, 2003; Marmot & Wilkinson, 2001; 2006; Subramanian & Kawachi, 2006; Wilkinson & Pickett, 2006).

A number of largely quantitative research studies have sought to explain variations in coronary heart disease specific to Scotland. For example, between 1984 and 1986, the Scottish Heart Health Survey recruited more than 10000 men and women aged between 40 and 59 years of age from GP practices across Scotland (Shrewry, et al., 1992). It investigated geographical variation in coronary heart disease for known risk factors such as blood pressure, cholesterol, smoking and alcohol consumption (Smith et al., 1990). The study results were wide reaching and in particular they suggested a complex spatial pattern between coronary heart disease mortality and a variety of social and lifestyle variables. Hart et al., (1997) showed that there were differences between regions across Scotland most notably in relation to smoking – one of the classic known risk factors for CHD. The results showed a concentration of high mortality for CHD in regions in the West of Scotland. Despite this distinct geography, the authors concluded that specific area

effects were small compared with the majority of health effects being due instead to individual characteristics. These regional differences were further explored by Smith et al., (1990) who identified that between Scotland's two largest cities major geographical differences in relation to CHD risk factors and mortality were present. Smith et al. (1990) drew a representative sample of over 1400 males and females aged 25 – 64 years who were recruited for the study in 1986. Standardised mortality ratios were also calculated for men and women aged 35 – 64 for the years 1979 – 1983. CHD and 1981 Census data were collected on the socioeconomic characteristics of both Glasgow and Edinburgh. The results revealed that Glasgow had a much higher rate of CHD mortality and demonstrated uniformly higher risk factors when compared to Edinburgh. The risk factors in particular showed a steep gradient aligned to socioeconomic status. In the sample, over 50% of participants from Glasgow smoked compared with about 30% in Edinburgh. There were differences in social class, employment and housing tenure between the two cities reflecting socioeconomic differences. These socioeconomic differences were thought to explain the coronary risk difference between the two cities.

Other Scottish studies have investigated the associations between individual socioeconomic factors and area based socioeconomic factors for CHD risk factors and mortality. In particular, between 1972 and 1976 the Renfrew and Paisley study screened over 15000 males and females for cardiovascular disease risk factors and mortality from cardiovascular disease in these two locations in the West of Scotland (Smith et al., 1998). Individuals were classified as either manual or non-manual workers and assigned a corresponding social class category. Their addresses were classified into postcodes allowing area based deprivation categories to be defined using the Carstairs index (Carstairs and Morris, 1989). The results showed that there were large differences in cardiovascular disease risk factors by individual social class and area based deprivation. Those in lower social classes who were living in areas with high deprivation showed higher cardiovascular disease risk profiles and greater cardiovascular disease mortality rates (Davey-Smith et al., 1998; Smith et al., 1998). These studies highlighted geographical variations in coronary heart disease and have informed the investigation and management of CHD in Scotland. It has been argued that low socio-economic status and deprivation is a particular barrier in seeking treatment. Evidence has shown that

individuals from deprived areas who develop CHD are less likely to be treated and offered surgery once CHD has developed and they are more likely to wait longer for surgery than their counterparts from less deprived areas (Pell et al., 2000). Further evidence suggests that long term survival after emergency admission for angina or heart attack is worse for those from deprived areas (Capewell et al., 2006) and, for preventative services such as cardiac rehabilitation, geographical variations are observed by those from different socio-demographic population groups, such as women (McGee and Horgan, 1992; Cooper et al., 2002) and those from areas of social deprivation (Pell et al., 1996; Melville et al., 1999; Ramm et al., 2001; Cooper et al., 2002; Tod et al., 2001; 2002).

The majority of the neighbourhood effects literature and epidemiological research into specific diseases, such as coronary heart disease has a positivist orientation which relies on measurement and correlation in order to attempt to identify causative mechanisms for particular health outcomes. This can result in a tendency to view people as individuated and as homogenous containers of individual social action. Indeed place is often viewed in dichotomous ways (affluent/deprived; healthy/unhealthy), or as a backdrop to events. Macintyre et al., (2002:131) have highlighted that there is still much to be done to 'to shed light on the interior of the "black box of places"'. In health research, a biomedical perspective on the body is frequently adopted where the individual is often reduced to a collection of body parts and behaviours (Gatrell & Elliot, 2009). These attributes do not provide meaning about illness, nor provide the means for understanding in detail the subjective experiences of health and illness which are generated, mediated and demonstrated in and through place.

## Biomedical and social constructions of health and ill health

The underlying ontology of bio-medically focused studies of disease views the individual body often as a distinct and contained entity separated from spaces, social relations and other factors which affects it. The medical view of the body was heavily influenced by Descartes (1596-1640) who secularised the body by comparing it to a machine under the philosophical assumption that the mind and body were separate (Seymour, 1998). This often had the result of the body being seen as a collection of mechanisms that could be

treated in isolation. Disease, then, is treated as a separate entity which is located within the body, independent of the whole person. When disease occurs, the nature of the body is exposed and illness becomes a threat to rationality, self-control and social life. Thus, the privileging and ability of biomedicine to resolve and deal with disease is elevated and directed towards controlling the 'leaky body' (Shildrick, 1997). Being ill then results in a unifying condition and common identity, that of being sick, such as in the case outlined by Parson's (1951) 'sick role.' This reduction requires the sick person to place 'trust' in science and medicine and it has been suggested by Herzlich & Pierret (1987) that being sick and being treated have become synonymous. However, chronic conditions, such as coronary heart disease require on-going management both by biomedicine, and the individual which creates a different scenario. The traditional medical model tended to assume that diseases were universal and "invariant to time or place" (Conrad & Barker, 2010). Health geography has extended this debate and acknowledged that disease and illness, although intimately related, are experienced interactively and comprehended in different ways dependent on the individual and their social location (Williams, 1999).

Understanding disease and understanding illness are quite different and the latter cannot justifiably be understood using the same parameters as the former. In the case of coronary heart disease, being hypertensive (e.g. having high blood pressure) or having high cholesterol, both of which are contributors to heart attacks, may not be known by the sufferer. Therefore, it is possible to have disease and to not feel ill (Gatrell & Elliot, 2009). Biomedicine has become susceptible to the paradox of being highly attuned in understanding variations in incidence and prevalence of disease, capable of diagnosing disease and preventing symptoms of illness from emerging or returning but it is less well versed in the idea that illness has social dimensions (for example, there can be a detachment from the various dimensions of uncertainty, pain, suffering and distress experienced by individuals during illness (Jennings, 1986)), let alone attuned to the peaks and troughs which can occur from the initial shock of a heart attack (for example, through the patient's journey to recovery). Nevertheless, the medical view of disease has penetrated and influenced the ways in which we think about disease and bodies and the ways in which processes, structures and functions of bodies have been subject to changing scientific ideas and thoughts. However, views and interpretations of the body as

a “surface which is marked and transformed by our culture...as a sensuous being [and as] the material basis for our connection with, and experience of the world” (Valentine, 2001: 23), is often overlooked and therefore it is important to appreciate that health (and ill health) is the combination of relational and dynamic links between individuals. Individuals are connected to other individuals by networks of social and material relations, located in social contexts. These interact and contribute to the ways that individuals experience health and ill health. These co-constituted elements require a greater understanding of the interactive processes and mechanisms which influence health and ill health in different ways for different kinds of people. In order to weave these threads together, consideration is given to Pierre Boudieu’s cultural-structuralist approach for understanding geographical inequalities of health (Veenstra, 2007).

## Social theory and Bourdieu

Pierre Bourdieu (1930-2002), a leading French sociologist, offered a theory of social space and social action to understand how meanings are constructed and in turn, how these meanings influence social practice through the unconsciously routinised understandings and activities demonstrated in everyday life. It is the interaction of structure and agency and the focus on different forms of capital and the dichotomies which lie therein which makes Bourdieu’s social theory and analysis useful for understanding social and geographical characteristics of health (Curtis & Rees Jones, 1998). Bourdieu’s concept of ‘habitus’ (1990) plays a crucial role in accounting for the unthinking nature of many types of human action and can be helpful in developing understanding of the relationships between social structure, cultural systems and individual action in and through place (Williams, 1995). The habitus can be roughly explained as the mental structures through which people are pre-disposed to deal with the social world. It can be theorised as a set of internalised systems through which the social world is perceived and acted upon. Importantly, it is formed in the context of individual’s specific social locations, rooting them into a world view based on their social position which reproduces existing social structures (Lawler, 2004). While individuals choose their behaviours, they are predisposed by their habitus towards certain choices and these choices are characterised

by the social practices bound up in their own social environments and social circumstances (Frohlich et al., 2001).

Bourdieu exemplifies that different social groups through assorted 'cultural consumptions' are able to demonstrate their resources. For instance, elite and privileged groups are most likely to be rich in different forms of capital (i.e. economic, symbolic and cultural) and have the ability to distinguish their own tastes as refined or superior whilst simultaneously judging those deficient in these similar forms of capital as inferior. These demonstrations do not exist in a social vacuum or on a level playing field. Dominant social groups who have greater access to and are likely to possess more crucial forms of capital have more authority in placing worth on particular types of lifestyles which they are more likely to possess. Through this power, privileged groups are able to define, practice and legitimise their distinction from other, less dominant social groups (Shilling, 2003).

For Bourdieu, particular lifestyles can be seen to be a product of the habitus, expressed through tastes. Taste is a key issue in Bourdieu's analysis and refers to the processes whereby individuals adopt seemingly voluntary choices and preferences as lifestyles (Williams, 1995). Tastes are developed through availability of resources and lifestyles are 'chosen' which fit social positions and are, in turn, accorded different social and symbolic value in society. The affluent, due to their increased ability to be dominant across various forms of capital, have power to suppress the working class resulting in limits being placed upon them and make it difficult for the working class to switch between forms of capital. These forms of capital have strong geographical components leading to ideas of 'landscapes of consumption.' An example of these landscape differences are the locations of different types of class specific recreation, such as private gyms and restaurants, accessible by the rich as opposed to the streets and pubs frequented more readily by the poor (Curtis & Rees Jones, 1998). People may have the capacity to change their lifestyles but will not necessarily be disposed or motivated to do so and changes which may occur are likely to be in accordance with their underlying habitus. Certain lifestyle practices such as reducing negative health behaviours (such as smoking, unhealthy eating, lack of exercise) are likely to be unevenly distributed across society, particularly if the habitus of certain social groups does not predispose them to such practices. Dominant groups, able

to access the full spectrum of economic, social and cultural resources are much more likely to be able to adopt and practice healthy investments of this nature.

Quantitative health geography can contribute to our understanding of these geographical differences which appear to be significant but these approaches are not sophisticated enough at unpicking the habitus and this is where qualitative studies can enhance our understanding. By considering the interrelated nature of people, socio-cultural structures and systems which impact on population health in localised and contextual ways it is possible to view variations in health in a different way. Similarly, shedding light on CHD through ways other than by understanding the spatial distribution, risk factor prevalence or incidence within any given population group which characterises many quantitative research studies, requires different techniques and approaches. These types of study give little consideration to feelings, experiences and attitudes which individuals have about their health or ill health and most often their experiences are not taken into consideration, thus de-contextualising the experiences from wider influences. Place and neighbourhood through which the habitus is produced, reproduced and experienced are not often considered in research. In addition, it is important to consider in further detail the role gender plays in production and experience of health and ill health. It is important to acknowledge that gender is an important social determinant of health in a variety of ways (Raphael, 2008; Galdas et al., 2010). Men and women may perceive, behave and respond in different ways to health threats, such as a heart attack, due to the gendered construction of masculinity and femininity which shape identities, lifestyles, perceptions of health and illness and subsequent health care practices (Evans et al., 2011).

## Gender and health

Oakley (1972) distinguishes biological sex and gender in the following way. “Sex is a word that refers to the biological differences between male and female the visible difference in genitalia, the related difference in procreative function. ‘Gender’ however, is a matter of culture: it refers to the social classification into ‘masculine’ and ‘feminine’” (Oakley, 1972: 16). Biological differences can be used to categorise people as male or female, but not as ‘masculine’ or ‘feminine.’ Gender can be seen to have social, cultural and psychological

(rather than biological) connotations, which are socially constructed, fluid and interchangeable (Connell, 2005; Connell and Messerschmidt, 2005) and gender is "something that one does, and does recurrently, in interaction with others" (West and Zimmerman, 1987: 140). Masculine and feminine attributes are constructed to typify what society 'believes' is masculine or feminine. Stereotypical meanings are agreed on and people are encouraged to conform to these beliefs and behaviours and 'do' gender (Saltonstall, 1993) by adopting and maintaining these shared beliefs (Courtenay, 2000; 2009). Gender is not however, split neatly into two categories of 'masculine' or 'feminine.' Both identities are endowed with social constructions which are relational, complex and interchangeable. Notwithstanding the complexity of gender constructions, Connell's (1995; 2005) seminal work on masculinities proposed that although there are complexities within masculine identity, 'hegemonic masculinity' is the idealised form of masculinity to which most men aspire and to which 'lesser', more marginal or 'deviant' masculinities are unfavourably compared. In western society it is generally epitomised as a culturally authoritative pattern of masculinity often characterised as white, male, educated and upper/middle class. This becomes the dominant gender construction which subordinates less powerful forms of gender practice (e.g. homosexual men), marginalised masculinities (e.g. working class men or black and minority ethnic men) and women (Connell, 1995; 1996). The assertion and maintenance of hegemonic masculinity is performed by powerful groups who legitimise and reproduce social relations and practices which results in their continuing dominance. Part of this process is achieved by having the power to impose definitions on less powerful groups and dictate the terms in which events are understood in order for them to appear 'natural' and 'normal' (Emslie and Hunt, 2009). The hegemonic model of masculinity may only correspond to a selective few but many men are complicit in sustaining hegemonic masculinity because they benefit from the subordination of women (and less powerful groups of men). Connell (1987) asserts that in no way are there hegemonic femininities because "all forms of femininities are constructed in the context of the overall subordination of women to men" (Connell, 1987: 187). Hegemonic constructions of masculinity assert hierarchies that privilege masculine traits and characteristics such as self-sufficiency, self-control, physical strength and resilience as key parts of masculine identity (White, 1999; Wite, 2000; White & Johnson, 2000) as well as dominance, self-reliance and a denial of

emotion, vulnerability or weakness (Courtenay, 2009; Robertson et al., 2010). However, while a hegemonic masculinity may exist there may be other constructions of masculinity (and femininity) within different social and geographical contexts which people aspire to.

Assumptions are made, usually implicitly, about differences between men's and women's responses to health practices. Health and the maintenance of health have become an on-going task, with prevention, often promoted via government health policies, as better than cure. Increasingly, the moral imperative of maintaining one's health is a matter of individual responsibility requiring a commitment to "self- checking for symptoms of illness, readiness to seek medical help, and general awareness of one's susceptibility to ill health" (Moore, 2008). Notwithstanding the general trend towards individualisation of health responsibility, dominant gender constructions continue to position women as being responsible for the health of their family. Nettleton (1996) argued that efforts to raise the public's consciousness of 'risk' and instructions about self-reflection and bodily monitoring are first and foremost directed at and to women. Included in this perspective is help-seeking and self-checking and this attitude is reinforced by the government and other health organisations through their health policies and initiatives. In the case of the gendered masculine construction of heart disease and heart attack, there is to some degree however, a reversal of these 'fixed' notions about gender and health. Recent work interested in masculinity and men's health (Courtenay, 2000, Hunt et al., 2007; O'Brien et al., 2005; Robertson, 2006; Ruston & Clayton, 2002) has begun to critique the notion that 'healthiness' is a feminine characteristic. These authors have broadly argued that being female which was previously equated with sickliness and vulnerabilities has now come to be associated with healthiness and longevity, while being male is deemed to be negative to health. Until recently, research on heart disease or heart attack has not only been under-researched, but also under-theorised because social science researchers have rarely recognised men as being gendered social beings (White & Johnson, 2001; Emslie et al., 2006; O'Brien et al., 2005; 2007; Robertson, 2006). By comparison, these more recent studies recognise that masculinity is not a fixed set of traits, but rather that masculinities are multiple, produced and reproduced through men's actions and interactions, but masculinities are also influenced in, through and between places. In terms of Connell's (2005) ideas about hegemonic forms of masculinity – in the area of health we can

generalise it in terms of the stereotypical physically strong, dominant, stoical, emotionally restrained man, who is disinterested in his health and who refuses to seek help and ignores health information (Gough, 2006; Robertson et al., 2010). Quantitative researchers have identified the tendency for men to engage more readily in 'risky' lifestyle practices (e.g. increased alcohol intake, high speed driving etc.) which are implicated in poorer health outcomes for men (Courtenay, 2000). This has been interpreted as a manifestation of masculinity in which men have "little on-going relationship with [their] somatic processes - the body is to be used as an instrument to serve ends, rather than be listened to" (Seidler, 1989: 64). Robertson (2006) has shown in research exploring men's attitudes towards masculinity and their lived body in everyday life and its relation to health that there are complex and diverse relationships between 'masculinity' and 'health' which challenge certain simplistic assumptions, for example, that men do not care about their health or well-being. Evans et al., (2011) have argued that ordinary, everyday, diverse social practices which constitute masculinity and their effects on individuals' health require further research which challenges the notion that 'men' are one homogenous group. Masculinities then, intersect with other social determinants of health creating differences among men. Linking back to Bourdieu, although gender was not emphasised in relation to the notion of habitus, it is clear that gender is crucial to the lifestyle, values, dispositions and expectations of particular social groups that are acquired through the activities and experiences of everyday life.

## Lay perspectives on health and illness

In order to further and more fully illuminate the complexities and experiential accounts of health and ill health it is important to gain 'lay perspectives' on health. Lay perspectives describe how non-expert people understand and experience their health and how they perceive it. Blaxter (2007) points out that it is not necessarily useful to use the term 'lay' because lay knowledge and understanding is informed, at least in part, by professional knowledge and understanding. Thus, Blaxter. (2007: 26) suggests that lay understandings can be better defined as common-sense understandings and personal experience, imbued with professional rationalisations. Lay perspectives (also known as lay beliefs, lay understandings and lay concepts) are based on the fundamental assumption that people

themselves often have the greatest insight into their own experiences of health and it is therefore important to understand what these are (Earle, et al., 2007). As a backdrop to this, current medical discourses encourage individuals' to recognise that the body is subject to numerous risks (many of which lie outside our individual control), but simultaneously we are told that health is something that we can and should choose (Moore, 2008). Thus, there "appears to be a powerful moral imperative associated with health and the normality of health" (Popay et al., 2003: 3). Crossley (2003) argues that increasingly, health has become synonymous with ideas to do with being a good and responsible person. The pursuit of health is therefore seen as something virtuous and highly valued. Peterson & Lupton (1996) refer to this as the 'imperative of health'. The extent to which this notion is prevalent is indicated by research findings that demonstrate that people prefer to claim they are healthy (Blaxter, 2004) or are at least trying to be (Crossley, 2003). This ties in with neo-liberal notions about individual responsibility. The view that individuals have a moral responsibility to look after their own health is echoed within and across many features of health promotion and health service provision. The morality of health is strongly linked to ideas of 'good citizenship' and the drive to be a fully functioning member of society – one who protects and maintains their own health rather than putting a strain on society's finite resources (Blaxter, 1997; Galvin, 2002).

Lay perspectives are not homogenous, however, rather they are complex – they have been described as 'multi-factorial' (Popay et al., 2003). They differ between individuals, communities and cultures and evolve over time. They also differ with age, levels of education, social circumstances and gender. Lay perspectives on health (or illness) often challenge theoretical, reductionist notions about what health is and draw on a much wider range of understandings and experiences. The experience of illness and the meanings of illnesses have social, cultural and historical significance. Meanings about the body, health and ill health are experienced differently depending on social position and social practices particular to individuals, their social environments and other important influences (Frohlich et al., 2001). With regards to lay beliefs, hearing individual voices from those who experience ill health and from those for whom health divides have an impact is more modestly undertaken in health research, but in order to extend this type of evidence a social constructionist perspective is required (Popay et al., 2003; Gatrell &

Elliot, 2009). Social constructionism is a conceptual framework whose approach to illness is rooted in a recognition of conceptual distinction between disease (the biological condition) and illness (the socio-cultural meaning relative to the condition) (Eisenberg, 1977). Thus, a social constructionist approach highlights how illness is shaped by social interactions, shared cultural traditions, shifting frameworks of knowledge and relations of power. The writings of Michel Foucault are important in this latter regard. Foucault (1975; 1977) regarded knowledge as a form of power and he stressed that expert medical discourse constructs knowledge about the body in ways which suggest 'normality' and 'abnormality' which are not strictly objective or naturally given. The result is that a principle form of power in modern societies is medical discourse which influences people's behaviours, impacts on their subjective experiences of embodiment, shapes identities and legitimates the importance of medical interventions. The differences between those with medical knowledge (doctors and nurses) and the 'patients,' reinforces power differentials with the patient made vulnerable due to their condition, with little means of directly challenging medical decisions. Lupton (2003) has argued that members of the working classes and other socio-economically disadvantaged groups lack power in medical encounters and interactions with powerful medical practitioners who seek to maintain the status quo. Some feminists have suggested that the medical profession is a patriarchal institution that generates definitions of disease and illness that maintain the relative inequality of women, for example by attending to their body's weakness and susceptibility to illness by controlling and measuring physiologically natural processes such as menstruation, pregnancy and childbirth and re-framing them as medical conditions (Lupton, 1997). These biomedical perspectives of the body are so ubiquitous that they become embedded within social constructions and articulations of the body, health and ill health and these can produce tensions and contradictions.

Building on what has been suggested earlier, Kleinman (1988) and Turner (1996) have argued that the state of illness is fundamentally different to that of the disease. Illness refers to the social, lived experience of the symptoms and suffering which occurs from disease without the individual being able to control it. The effect of a disease (such as a heart attack for example) can be experienced differently as an illness which can provoke intense emotional reactions and fracture an individual's sense of security. The sudden

onset and surprising nature of a serious condition can "assault the body and threaten the integrity of self" (Charmaz, 1995:657). Individuals can struggle to make sense of their illness and to come to terms with what has happened. The notion that the self is in crisis through the experience of a chronic condition has been outlined as 'biographical disruption' (Bury, 1982; Williams, 1984; 2000) which suggests that illness and especially chronic illness is "a kind of experience where the structures of everyday life and the forms of knowledge which underpin them are disrupted" (Bury, 1982: 169). Firstly, taken for granted assumptions and behaviours can be called into question. Secondly, in attempting to explain what has occurred, the person has to reformulate their biography and sense of self around the chronic illness experience and thirdly, practical responses to the disruption involve mobilising resources which can include "physical as well as social, temporal and well as financial, medical and well as cultural" (Williams, 2000: 43). Chronic illness and acute events in particular, juxtapose the former self (before heart attack for example), with the new impacted self (after heart attack). This identity re-evaluation is an on-going process and Charmaz has succinctly stated that "the self is more than its body and much more than an illness" (Charmaz, 1991: 258). The consequences of the heart attack can be far reaching and the impact and upset can affect daily life in practical, physical, social and psychological ways (from mundane tasks, through work, to social relations and other aspects besides). Thus, the experience of a heart attack will be mediated by multiple factors, gender, social locations, knowledge and understanding, and expectations of health. The places within which people live consequently structure their lives in particular ways and lives are contextualised and bound to and within place. Social interactive practices between structure, individual agency, beliefs, behaviours and actions exert powerful relationships which impact on how individuals know, see and act (Curtis & Rees Jones, 1998). Therefore, individual health experiences are not just individual but also socially formulated and influenced by the individuals' habitus.

## Lay perspectives and coronary heart disease

There has been a growing interest in and study of lay perspectives of illness including a growing body of literature on coronary heart disease (Davison, et al., 1991; Wiles & Kinmouth, 2001; Emslie et al., 2001). It is important to understand lay perspectives of

illness, not least as Schoenberg et al., (2003: 272) have suggested because a failure to do so in the past has contributed to a "tendency to blame the victim." Additionally, gaining greater awareness of patient's experiences of their heart attack can improve understanding about CHD more broadly and improve CHD prevention and education (Wiles & Kinmouth, 2001; Emslie, 2005). Clark, (2003) investigated lay perspectives on stress and myocardial infarction and argued that there appeared to be a juxtaposition between lay and professional perspectives. These differences included the causes and treatments of CHD, 'risky' behaviours and also bodily and psychological disturbances caused by a heart attack. Professionals' understandings of patients' individual circumstances appeared to be poor and insights into patient needs and emotional conditions, Clark argues, were often neglected. Inadequate knowledge of the factors, meaning and values which inform patient perspectives and decisions about CHD can, in turn, have implications for treatment and limit the effectiveness of interventions (Clark, 2003). Understanding both medical as well as lay perspectives about health are important for appreciating why people behave in certain ways when it comes to their health. For example, lay perspectives about coronary heart disease have shown that people view healthy lifestyles as ways to reduce the risk of heart disease but at the same time, they are aware of the random nature of the disease and whom it can affect (Davison et al., 1992). This in turn, can influence the way in which interventions intended to improve health are designed, communicated and implemented. Anyone concerned with trying to change or influence health ought to incorporate lay perspectives which can help contextualise (both socially and geographically) the experiences of illness in 'real' life circumstances.

## Experiences of heart attack

As has already been suggested, the epidemiological literature related to understanding coronary heart disease and associated risk factors is extensive and well established (Allender et al., 2008; Scarborough & Weissberg, 2011; Kotseva et al., 2009; Lloyd-Jones, et al., 2010). Evidence has informed treatment and prevention strategies for coronary heart disease, including heart attacks yet, at the same time, the often gendered construction of coronary heart disease has resulted in certain failures for exploring and

understanding coronary heart disease (including heart attacks) in greater detail. It has been suggested that there is a prevailing assumption that experiences of cardiac problems are "biologically and socially neutral" (O'Donnell, et al. 2004: 119). This, in part, is often due to social constructions of disease and when men and women share a common illness, such as heart disease, biomedical research has traditionally focused on the male body and male experience of illness which has been constructed as 'typical' and rendered all other experiences (i.e. female) as 'atypical.' The prevalence of this 'typical' experience as the norm, has resulted in imbalances in terms of the under-representation of women in clinical trials, but has also contributed to the construction of coronary heart disease as a 'male' disease which is reinforced in the media and in health education and health service design (O'Donnell, et al., 2004). This has served to undermine research which has shown that women are at heightened risk for poorer outcomes from CHD, as well as the recognition that there are complex and diverse relationships between 'masculinity' and 'health' that challenge certain simplistic assumptions, for example that men do not care about their health or well-being (Schoenberg, 2003; Williams et al., 2009).

Despite the prevalent gendered 'male' construction of heart disease both health professionals and lay perspectives often collectively view women as 'low risk' and not as likely 'coronary candidates' (Lockyer and Bury, 2002; Davison, et al., 1991; Emslie et al., 2001). Gender differences are still commonly constructed along (male) gender lines with widespread misconception that coronary heart disease and heart attacks are male afflictions. According to the British Heart Foundation, the myth that heart disease affects more men than women is de-bunked by their recent figures which suggests that it kills 1 in 3 women which is similar to that of men (http://www.bhf.org.uk : accessed 20.05.12). In their recent publication which was published to highlight coronary heart disease risk for women entitled "Women and heart disease" (BHF, 2012) the foreword includes the following quote,

> "Man dies from heart attack...it's a common enough story in the news. But when was the last time you heard about a woman dying from heart disease?

> Maybe never – which must mean that women aren't at risk of heart problems, right?"

This quote highlights the common perception that coronary heart disease is a 'male' disease. The 'invisibility' of women in social constructions of coronary heart disease is maintained in a number of different ways (Emslie et al., 2001). Indeed, descriptions of 'coronary candidates' who are "the kind of people who get heart trouble" (Davison et al., 1991) are most often imagined as men. In Emslie et al's (2001) work, both men and women tended towards describing men, despite participants in various studies acknowledging that female family members were also inflicted with heart troubles. It is not only within lay perspectives where there may be gender bias for coronary heart disease. Gender bias also exists in evidence based medicine. For example, Raine et al., (2002) showed that despite well-known and recognised gender differences in coronary heart disease management in critical care units, UK NHS guidelines for patient management were not gender specific, nor were guidelines regarding cardiac rehabilitation and recovery (Bjarnason-Wehrens et al., 2007). If evidence related to illness and its management lacks or excludes female participants, then information and guidelines should clearly state and outline explicitly that the evidence has been drawn solely from men, but often this does not happen and differences between males and females are equalised, denied or controlled for which masks fuller, detailed understandings of gender difference which may affect health (Holdcroft, 2007, Denton and Walters, 1999). Risberg et al., (2006) have suggested that the structures and hierarchies within medical science, where the biomedical model prevails, can be reluctant and potentially dismissive of the need to include in greater detail specific gender issues and perspectives. It is therefore, important to research men's and women's understandings of their cardiac event in order to capture the complexities of their experience (Johansson, et al., 2003).

Within cardiac health research, the role of psychological factors, including beliefs and perceptions about illness and the influence these factors have relative to the adoption of healthier lifestyles and risk reducing behaviours post heart attack is a focus for research (Broadbent et al., 2006; Leventhal et al., 2008; 2011). It has also been identified that early

identification of patients illness perceptions could improve their outcome in cardiac rehabilitation programmes (Petrie et al., 1996). Subsequently, some research, particularly Alsén et al's work (2008) has set out to develop a deeper understanding of illness perceptions following heart attack. However, this study, like a number of others within the small, but increasing qualitative research on men's and women's experiences of heart attack, has conflated participants into one group for the purpose of analysis, and explicit gendered comparisons are often not outlined. A number of studies have highlighted that there is a dearth of information concerning women's experiences of heart attack (including experiences of recovery) which may be partly due to the focus of cardiac research being on men's experiences of risk, diagnosis, treatment and rehabilitation (White et al., 2007, Jackson et al., 2000; Albarran et al., 2007).

The qualitative research conducted to date about men's and women's experiences of their heart attack has been more sensitive to the need to study women's experiences of CHD, not just men's, but most often this has been done separately. The purpose of researching women's experiences of heart attack is to better understand and identify potential differences in their experiences and also to highlight if there is a failure to meet women's needs post heart attack, as a result of 'gender neutral' presumptions about their condition (O'Donnell, et al., 2004). Women's experiences after their heart attack in White et al's (2007) study included exploring aspects of adjustment in terms of women's perceptions of their illness event, but also the impact of their heart attack on their relationships and the coping strategies they developed. It was found in this research that women viewed the heart attack as unexpected and this evoked feelings of uncertainty and fear. Women tended to minimise their symptoms and the impact of their condition. In line with commonly held cultural perceptions of a female gendered role of women as carers, evidence from this research showed that they provided a lot of support in order to stem others' anxieties and fears, despite their ill health. This suggests the importance placed on remaining emotionally strong and independent within their caring role and this begins to address the expectations, values and dispositions of particular social groups but does not make explicit linkages to how these are influenced in and through place.

In addition to the lack of evidence regarding women's experiences of heart attacks, there is also a lack of qualitative exploration of how men experience heart attacks (Hutton & Perkins, 2008). In Hutton and Perkin's paper (2008), men demonstrated shock at experiencing a heart attack, particularly in light of believing themselves to be fit and healthy and there was uncertainty about their physical capacity and frustrations at the perception that they were being treated as invalids and being overprotected by partners and family members (Evans, et al., 2011; Gregory et al., 2006). Other studies such as Hagström et al., (2005) aimed to study how men viewed their illness and medication. Men, in this study, gave mechanical accounts of their illness; that the body was an apparatus which could be repaired and that the illness was something that had 'struck' them down, but the dramatic nature and experience of a heart attack left deep and lasting impressions. Additionally, illness was seen as a sign of weakness which restricted and interfered with maintaining their masculine identities commonly derived through being able and capable to work. Men, in this study, also relinquished the care for their illness to their partner or other family members, especially for supervising medication, suggesting that men may be more inclined to adopt the 'sick role' (Parsons, 1951). Few studies with a specific gender focus deliberately on both men and women explicitly compare their experiences (Emslie, 2005). However, since Emslie's review in 2005, there have been a small number of studies which have identified this gap in knowledge and have aimed to explore it in further detail. Medved & Brockmeier's (2011) study explored the psychological and social implications of men's and women's coronary heart disease. The focus of their study was on the psychological and social aspects of illness and the healing narratives provided by men and women. They found that these dimensions were interwoven and that there were commonalities as well as differences in the accounts. They found that beliefs about CHD, social relations and emotions were gendered. In terms of understanding illness, men's stories about their heart attack, often used mechanical metaphors suggesting that there was a culturally preferred healing narrative, enacted by men with CHD, clearly influenced by medicine and public health discourses (Curry and O'Brien, 2006). By contrast, women tended not to describe their illness experiences using mechanical metaphors suggesting that women's experience of heart disease may not map onto those of men. If men's symptoms become the norm to which women's experiences are compared, then these biomedical metaphors may not fit with

their experiences. In Medved & Brockmeier's (2011) study, women participants appeared to grapple with ways of describing and cognitively organising their cardiac experiences. Therefore, it is important to acknowledge that gendered constructions of the heart attack experience require further research.

Recognising symptoms of a heart problem is crucial for achieving timely and accurate medical attention, for it improves chance of survival and can prevent or limit complications, but research shows that there are consistent problems in recognising and responding to symptoms, with people delaying help seeking because of symptom misinterpretation or attributing symptoms to other conditions, such as stomach or muscle aches and pains (Meischke et al., 1998; Philpott et al., 2001; Miller 2002; Rassin, 2009). Common themes evidenced in other qualitative research related to gender differences in interpreting symptoms and seeking help after sustaining a heart attack (White & Johnson, 2001; Emslie, 2005; Rassin, 2009). Indeed, White & Johnson (2001), clarify an issue long recognised in the UK, and worldwide with many studies suggesting that certain groups of people, such as women, are more at risk of delaying seeking medical advice (Foster and Mallick, 1998; Walsh et al., 2004). Similar delays are observed among older people (Meischke et al., 1993) and also those who have had a previous myocardial infarction (Alonzo and Reynolds, 1998). Findings indicate that often women tend to report symptoms and pain in areas other than the chest such as the hands, shoulders, neck, jaw, stomach and back. These symptoms are often described in the literature as 'atypical' (Sjöström-Strand & Fridlund, 2008). Men, by contrast, report the location of their pain as the chest (McSweeney et al., 2003; Efre, 2004; Rassin, 2009). In a recent quantitative study by Whitaker et al., (2012), public knowledge about heart attack symptoms derived from 302 participants demonstrated that over half of the sample knew only two or fewer symptoms, demonstrating a paucity of knowledge of the symptoms of heart attack among the general public, currently. For those who experience a heart attack, symptoms, typical or atypical were reported, but most highlighted that their symptoms were not what they were expecting (Zerwic et al., 2003).

The often shocking and disruptive nature of the heart attack has been shown to influence subsequent well-being and uncertainty surrounding one's life situation and appears to be

a common and fundamental aspect of both men's and women's experiences of their cardiac event (Dixon et al., 2000; Jensen & Petersson, 2003). However, ways of adjusting and adapting to changing health after a heart attack have implications and consequences for improving health and accessing health care services which can manifest differently for men and women (Galdas, et al., 2007). Understanding why this is the case requires theorising about gender and understanding differences in the social construction of masculinity and femininity related to heart disease. A study by Kristofferzon et al., (2007) aimed to describe experiences of daily life for women and men during the first four to six months after a myocardial infarction, with a focus on the problems experienced, the management of problems and support provided from their social networks. Patterns of gender differences were found which were suggested to affect women's and men's health. Women often described 'atypical' symptoms at the onset, had difficulty interpreting symptoms, repressed their symptoms and practised self-treatment in order not to bother others. As a result, women delayed seeking treatment, which can worsen prognosis. Men often described 'typical' symptoms at the outset and asked for help from their social network or sought emergency treatment themselves. They worried about their physical function and their prognosis, so much so, that they minimised or repressed the fact that they had sustained a heart attack. This mode can result in men not taking advice, or not taking it as seriously as they should. Therefore, experiences of heart disease and heart attacks, including the recognition of symptoms and help seeking may be complicated by gender differences of the experience itself with some studies showing longer delays in women than men (Walsh et al., 2004) whereas other studies such as Grace et al., (2003) not showing any gender differences. It has been highlighted in Johannson et al's (2004) study that the decision to seek help is a complex process and includes the interaction of knowledge, experience, beliefs, emotions and the context of the event (Pattenden et al., 2002). Previous research has also outlined that there are differences in the perceptions of coronary heart disease risk with women often under-representing their risk for CHD (Hart, 2005). This may come as little surprise as CHD and heart attack are still often perceived both by the general public and health professionals as afflicting males, despite recent challenges (Lockyer and Bury, 2002). Indeed, less attention has been paid to the actual experiences of heart attack amongst men and women. In much of this qualitative research, despite gender being an issue of importance

for investigating experiences of heart attack, limited qualitative research has paid attention to other determinants of health, such as deprivation or social class (East et al., 2004). These determinants have often not often been qualitatively explored from men's and women's perspectives vís a vís their heart attack experiences, nor have they been sufficiently explored regarding their influence upon recovery from heart attack. This thesis interprets these findings theoretically as expressions of differing manifestations of the habitus in which the lifestyle, the values, the dispositions and the expectations of particular social groups are a) affected by gender constructs and b) related to and affect health. However, the thesis also seeks to embed men and women who have sustained a heart attack, and their recovery from it, within their geographical neighbourhoods in order to explore in more detail the contexts within which their everyday life experiences occur.

## Experiences of recovery

Men's and women's experiences of recovery after heart attack are also a rather under-researched area, particularly and explicitly in relation to exploring the meaning of recovery from the patient's perspective (Tod, 2008). This thesis will argue that it is here that a more geographically situated understanding of habitus is of particular utility. The lack of qualitative research about patient's recovery after heart attack is inter-linked with bio-medical configurations of what "recovery" is. It has been highlighted by Tod (2008) that the process of recovery is assumed to be a staged process and the ultimate goal is to return to "normal", with the process beginning immediately after the heart attack with the patient trying to make sense of what has occurred and ending with some resolution and return to normal (Tobin, 2000; Johnson and Morse, 1990). However, Kelly and Gamble (2005) have outlined recovery as 'a process, not an end-point or destination,' suggesting that the notion of 'recovery' itself is variably understood.

## Framing cardiac rehabilitation

Cardiac rehabilitation services involve helping patients through a 'process by which patients with cardiac disease, in partnership with a multi-disciplinary team of health professionals, are encouraged and supported to achieve and maintain optimal physical and psychosocial health' (SIGN 57, 1: 2002). The main aim of cardiac rehabilitation is to help the patient to recover as quickly as possible and to reduce the likelihood of recurrence of the cardiac illness, by making lifestyle changes. Bethell, et al., (2009) have outlined that it has a 50 year history and an extensive evidence base to show it to be both a cost effective and beneficial treatment for patients with coronary disease. Proven benefits include improved capacity and tolerance for exercise, reduction in symptoms and stress, reduction in smoking and improved psychosocial wellbeing. Each phase of cardiac rehabilitation occurs at different time points following a cardiac event. Within the UK, national guidelines have recommended that patients admitted to hospital with a cardiac diagnosis are eligible to attend outpatient cardiac rehabilitation programmes (Department of Health, 2000; National Assembly for Wales, 2001; Scottish Intercollegiate Guidelines Network (SIGN 57); 2002). Within these guidelines there is recognition and an

emphasis on tailoring programmes to the individual. However, given the paucity of qualitative evidence related to patient's experiences of their heart attack and their meanings of recovery, there are still evidence gaps to be filled before truly individualised, menu-based cardiac rehabilitation programmes can be developed and delivered (Tod, 2008).

In the UK and Europe, cardiac rehabilitation is delivered in hospital settings, the community or at home. Programmes in the UK are often divided into four phases. The initial stage of CR (Phase 1), conducted in the hospital following a heart attack, assesses the patient's physical and psychological condition. Risk factors such as diet, smoking, exercise and cholesterol which are known factors implicated in coronary heart disease are assessed. At this stage, patients are reassured and any misconceptions about their illness and subsequent rehabilitation are addressed. Finally, patients are mobilised and discharge plans are put in place. This is the stage where patients are most often supplied with the Heart Manual.[4] Phase 2, which is known as the post-discharge phase, is the time when patients are convalescing at home. Patients can be vulnerable and psychological distress can be high at this stage. Support is provided by visits from either members of the cardiac rehabilitation team, Heart Manual facilitators[5] or primary care team and reassurance and further educational information about the illness is provided. Resuming physical activities at this stage is encouraged. Phase 3 is a structured exercise and rehabilitation programme normally commencing approximately 4 – 6 weeks post cardiac event. A course of graduated exercise training is the centrepiece and is supplemented by education, risk factor monitoring and correction, stress management and relaxation training. These programmes, historically exclusively hospital based, are increasingly being

[4] The Heart Manual is home based standardised self management programme developed by NHS Lothian that helps individuals recovering from a heart attack. It was developed in 1992 and provides an evidenced based approach heavily influenced by a cognitive-behavioural approach. The Heart Manual can be a stand alone rehabilitation programme or can be integrated with existing hospital/community based programmes. It provides information about lifestyle changes, psychological adjustment and medicines and addresses cardiac misconceptions and beliefs about causes. Further advice and information, a home exercise programme and stress reduction strategies are also included.

[5] Heart manual facilitators are specially trained health professionals tasked with working with individuals who have sustained a heart attack to work through the Heart Manual Programme which was developed by NHS Lothian.

provided in the community, particularly in community centres and leisure centres. Prior to undertaking this phase, patients are assessed again and information collected on a range of topics such as risk factors, medications, symptoms, social history and demographic information, and psychological assessments may be undertaken. The future goals of the patient are discussed and set in collaboration with the cardiac rehabilitation team. The onus of this phase of CR is for the cardiac rehabilitation assessment team to tailor the cardiac rehabilitation to the individual patient. The duration of Phase 3 should depend on the level of risk and responses of the patient and it can vary from four weeks in the younger, fitter patient, to six months or more in the older, less fit, higher risk patient. Commonly, the type of exercise traditionally adopted is circuit training which offers a degree of exercise variety and allows for individual ability. It also allows the patient to progress at their own speed and those supervising can fully observe and offer individual coaching and correction, if needed. A key aspect of the Phase 3 programme is that it offers an opportunity for social interaction and participants are able to discuss concerns or issues they have with the supervisory staff, and with their peers (BACPR, 2008). At the end of the programme, risk factors and medication are re-checked and lifestyle and exercise goals discussed. Phase 4 of cardiac rehabilitation is long term maintenance and continuation of these new lifestyle habits. The British Association for Cardiac Rehabilitation (2007) has an established scheme for training instructors working in fitness centres to provide continued exercise for cardiac patients. Patients are followed up in primary care, for example at GP surgeries, with annual checks for symptoms, exercise and smoking habits, weight management, blood and cholesterol checks and medication (Bethell et al., 2009).

Despite guidelines and frameworks for cardiac rehabilitation, the quality and provision of services have been challenged not least because participation rates have ranged from 15% to 59% (Pell & Morrison, 1998), and for many groups participation remains low within under-represented groups which include women and people from ethnic minorities. It has also been reported that the majority of studies investigated those most commonly referred to cardiac rehabilitation - low-risk, white, middle-aged male heart attack patients (Thompson & Bowman, 1997). Research studies have often excluded or enrolled only small numbers of women, the elderly, those on lower incomes and those

from socially deprived areas or other cardiac patient groups (NHS Centre for Reviews and Dissemination, 1998; Rees et al., 2005). The reason for this could be that these under-represented groups are less likely to be referred or attend cardiac rehabilitation programmes in the first place (Jackson, 2009; Rees et al., 2005; Wyer et al., 2001; Melville et al., 1999). Cooper et al., (2002) have outlined that non-attenders are likely to be older, have greater income deprivation, deny the severity of their illness and perceive they are less likely to influence its outcome. They also outlined that job status, gender and health concerns played an indirect role in attendance behaviour. Therefore, future research ought to be mindful about the accumulative socio-demographic, gendered and context specific aspects of attendance which require a greater degree of attention and sensitivity if attendance trends across these common 'non-attender' groups are to be addressed.

These factors present challenges for cardiac services to ensure that programmes provide equitable access. Accordingly another strand of research has focused on identifying individual factors (psychological ones) for predicting attendance. Understanding low participation and attendance at CR programmes has most often focused on defining predictors of attendance in order to provide recommendations and solutions to modify this variation. This focus on attempting to predict patient factors for non-attendance and non-compliance has permeated the cardiac rehabilitation literature and research of this type has been conducted internationally. Numerous studies have attempted to identify psychological, demographic and biological variables which may be implicated in failure to attend a cardiac rehabilitation programme, despite being referred. The conclusion drawn is that if non-attenders can be identified targeted interventions can be put in place to increase attendance and support recovery (Cooper et al., 2002). There is the assumption then, that by attending cardiac rehabilitation programmes the effectiveness of such programmes is guaranteed and that benefits will be manifest and positive change will occur *because* of the programme. Unfortunately, this assumption seems to be a myopic one based on limited and narrow evidence mostly supported by research based on white, male, middle aged, low risk, straight-forward heart attack cases. Gender, age, socioeconomic and ethnic differences appear to be described in the literature, treated as problematic, but not sufficiently detailed when programme effectiveness is the focus (Clark et al., 2007). The individual behavioural focus and the lack of attention to wider

contextual factors (be it socio-economic, gender, age or ethnicity) in much of the cardiac rehabilitation literature as influencing factors for attendance and engagement, highlights the prevailing biomedical focus on human agency for success or failure in recovery after heart attack (Clark et al., 2007). Few studies highlighted that reasons for low uptake and attendance may also be related to service capacity and, by extension, it appears to be taken for granted that uptake and attendance are individualised issues. However, it has been highlighted that provision of services is not at sufficient levels for all of those who require them (Clark et al., 2005; www.bhf.org.uk/default.aspx?page=10359: accessed 11.04.2012). It is perhaps little surprise that for certain groups of patients who may already experience barriers to attendance, the limited capacity and the inflexibility of current cardiac rehabilitation programmes may impede access and ability to attend and result in inequities for recovery after heart attack (Tod et al., 2001; 2002). Moreover, it has been suggested that in order to best respond appropriately to the health needs of individuals (and communities) and to address inequalities, it is highly necessary to incorporate the views of those who are often excluded (Tod et al., 2002). Another criticism of the four phase framework of cardiac rehabilitation is that the phases suggest and imply that rehabilitation, and therefore recovery, are linear processes. The four phases reflect the physical recovery of the heart muscle and these phases do not take into account the wider context where patient's experiences are produced and embedded, nor are other complex factors which can influence the recovery process, such as gender, age or socio-economic status, for example, explored. The lived experience of not only the disruptive heart attack but also the on-going and enduring process of recovery (in place) and what this means to patients, is rarely considered (Tod, 2008; Galdas et al., 2010).

## Conclusion

Acknowledgement of and attention to the wider social context within which individuals live and the ways in which place shapes not only gendered constructions of health and ill health experiences but also responses to a health threat such as a heart attack and consequent recovery processes, have been shown to be often absent in literature investigating experiences of heart attack. Past studies highlight the individual's experiences of heart attack but less attention is paid to understanding men's and women's lived experience of place (within their neighbourhoods) and how such individual experiences are produced, shaped and embedded in the wider social context of place is a significant research gap within the qualitative literature surrounding experiences of heart attack and recovery. This thesis is suggesting that within cardiac research a fuller appreciation of 'lay perspectives' of heart attack and recovery and the importance of gender in the constructions of these perspectives is required. In addition, it is important to recognise that lay perspectives are also geographically situated and that health experiences are produced, reproduced and enacted through patients' habitus. As health outcomes differ geographically, it is important to understand and explore the characteristics of place (material, social, cultural, structural aspects of place), as well as people's experience of place. Influenced by Bourdieu, it is therefore important to view individual's experiences and responses to their health and ill health in and through place. Differing habitus provides differing opportunities or constraints for life chances and choices (Bourdieu, 1984, 1990; Gatrell et al., 2004). This is particularly important when considering the focus on individual lifestyle behavioural changes which recovery programmes, such as cardiac rehabilitation, espouse. Life chances influence lifestyle choices in two ways, namely through socioeconomic resources and boundaries of perception which are derived through socialisation processes and experience located in a particular social environment (Cockerham, 2005). In conjunction with other social determinants of health, gender and age specifically require greater attention. Social phenomena, such as ill health, are complex and involve the interaction between individual agency and structure, place, gender, age and socioeconomic status. In addition, and of specific importance within this research, different experiences and responses to

heart attack and recovery must be viewed as made in and through the habitus within which they occur which also requires consideration of cultural, social, economic, and political characteristics of place. As different aspects of economic, geographical, social and cultural resources prevail across different areas, and interact with gender, age and socioeconomic status, and through which health inequalities are maintained, investigating contextualised aspects of health in local contexts may illuminate in greater detail the lived experience of health and ill health. Practices which are produced in and through place therefore influence men's and women's experiences of their health and recovery from heart attack.

This thesis thus strives to link a greater awareness of place as being socially constructed, and which affects people's understanding and experience of health, ill health and recovery. It uses mixed methods to achieve this. Being sensitive to the complexity of place, produced through socio-cultural, historical, economic and political processes can thus position interpretations of men's and women's constructions of their heart attack and recovery in the places through which they are produced. Recognising that health and illness constructions are complex, contradictory and often contingent on a wide variety of influences, such as medical and social constructions is important and enacted in different ways through lifestyles. This research attempts to fuse these elements to portray a more locally sensitive and nuanced exploration of heart attack and recovery in Fife. This thesis is also suggesting that cardiac rehabilitation programmes more fully appreciate 'lay perspectives' of heart attack and recovery and the importance of gender in the constructions of these perspectives. In addition, it is important to recognise that lay perspectives are also geographically situated and that health experiences are produced, reproduced and enacted through the habitus.

The next chapter will outline the methodology used in this research to explore and understand men's and women's experiences of heart attack and recovery in post-industrial Fife.

# Chapter 3: Methodology

## Introduction

This chapter will outline the methodological approach used for this research. As stated in Chapter 1, this research adopted a mixed method approach. However, it is important to outline that the research transitioned from a largely quantitative study initially, to a primarily qualitative study and the rationale for this is outlined in detail below. This chapter will provide a description of the different stages of the research and outline how the research was conducted, including the processes and procedures involved in recruiting participants for one to one interviews which was the main method adopted in the second, qualitative stage of the research. Ethical considerations which this research raised are outlined and the latter part of the chapter will discuss how the data was analysed using a grounded theory approach.

## The methodological approach

*The evolving research*

In order to answer the research questions, this study used several different stages of data collection which resulted in a mixed methodological approach which included a multi phase research design:

- preliminary quantitative data collection and analysis of Census data and coronary heart disease mortality data
- historical geographies of Fife using documentary, archival and secondary data and analysis
- qualitative in-depth interviews with eight NHS Fife cardiac rehabilitation staff and
- qualitative in-depth interviews with fifty NHS Fife cardiac patients who had sustained a heart attack.

Within this study, the research used different types of research strategies in order to answer the different types of questions which were hypothesised in the early stages of the research, but also other questions which emerged as the research progressed. The researcher collected different types of data which produced different sorts of answers. It is important to be mindful that the research took place in social, cultural, historical and political contexts which themselves incorporated multiple theoretical and practically orientated perspectives (Barbour, 1999). Thus, the rationale in this research for employing different methods and information sources was to fundamentally understand in greater detail the complexity of the phenomena being studied. The types of methods used to answer the research questions within this study necessitated adopting a mixed method approach. Underpinning the development of both the formulation of the research questions and the research methodology were philosophical assumptions which influenced and guided the researcher in how she approached the study of the social phenomena of interest (Guba and Lincoln, 1994). Ontology refers to claims and assumptions that are made about the nature of social reality; what exists, what it looks like, how it is constituted and how these constitutive parts interact with one another. In short, ontological assumptions are concerned with what we believe constitutes social reality (Blaikie, 2007). Epistemology is concerned with answering how social reality is known and is concerned with the nature and scope of human knowledge and what kinds of knowledge are possible and how knowledge can be adequately judged and distinguished using certain criteria (Blaikie, 2007). These claims or assumptions of what constitutes social reality and knowledge and the paradigms which comprise different philosophical positions to such knowledge claims have been debated and contested (Tashakkori & Teddlie, 1998). It has been argued that quantitative and qualitative methods stem from different ontological, epistemological and axiological assumptions and that the assumptions associated with both paradigms are incompatible (Bryman, 2012, 2006, 2003; Tashakkori & Teddlie, 1998). However, it has been argued that pragmatically, using a mixed methods approach to research, systematically integrating multiple types of questions which can be answered by multiple types of data and analyses, leads to inferences which are integrative and complementary (Tashakkori & Teddlie, 2003; 1998; Teddlie & Tashakkori, 2006). The false dichotomy which has existed between quantitative and qualitative approaches has been recognised by numerous

authors (Denzin, 1970; Hammersley, 1996, 2008; Bryman, 2006, 2007). Creswell (2003) has outlined that it is perhaps more appropriate to focus on the research 'problem' and to use whichever method is relevant in order to understand the phenomena in question.

Initially, the research was focused on showing if neighbourhoods impacted on health outcomes for coronary heart disease in Fife. This focus required the use of methods which would quantify variations of coronary heart disease outcomes by geographical locations in Fife. It was hypothesised that certain neighbourhood characteristics could have a bearing on the health of contemporary populations in Fife, over and above individual characteristics. Fife, where this research was situated, was an interesting location to study as there were observed geographical contrasts within the region, particularly related to health outcomes, most notably observed between areas of wealth (north east of Fife) and areas of poverty and deprivation (central and west Fife). The decline of many of Fife's heavy industries, particularly mining and manufacturing, was additionally hypothesised to have helped to contribute to changes in the social, economic and physical environments of these areas through the processes of de-industrialisation which, as has been suggested by other authors, can combine to create conditions which can lead to poorer health and mortality (Riva et al., 2011; Walsh et al., 2010; Mitchell et al., 2000; Phillimore & Morris, 1991; Phillimore, 1993; Phillimore et al., 1994). In Chapter 4 further detail will be provided about Fife and its social history (obtained through primarily archival and secondary data sources) as well as the importance of understanding place more broadly (Jones & Moon, 1993: 515). In addition, the quantitative methodology used will be outlined and results from this stage will be presented.

There is little doubt that certain areas in Fife have been blighted by the processes of de-industrialisation and in order to understand the extent to which CHD outcomes differed by area, quantitative methods at this stage of the research were required. The methods used for defining areas (in the case of this research on the basis of their socio-economic and socio-historical background as 'mining deprived', 'non-mining deprived' and 'non-mining affluent') are described in detail in the next chapter, and which also outlines how these "industrial areas," once defined, were combined with individual level population

health data to show differences, by area, for CHD outcomes. Importantly, the quantitative methods used made connections between place and mortality for CHD. The quantitative results, highlighted in Chapter 4 suggested that places (or at least places characterised by their industrial past) may be worse for coronary heart disease mortality. However, these results did not explain how or why variations observed for CHD were produced, nor did they provide the insights to better understand this phenomenon. The results were interesting but limited and they raised further important questions which were largely qualitative in nature.

To understand these geographical health variations in more detail, different research questions began to evolve which necessitated a shift to a more inductive research design. The poorer rates of CHD mortality and prevalence in mining areas and manufacturing areas were inferred to come about through multiple, interrelated processes – related to age, gender, socioeconomic status, local culture, behaviours and health beliefs and attitudes to health, amongst others. Therefore, the emergence of further research questions was broadly concerned with understanding social and historical characteristics of place and how these can explain in better detail 'the social.' In particular, within this research, understanding how men and women from both deprived and affluent areas across Fife (defined as 'mining deprived', 'non-mining deprived' and 'non-mining affluent') and who had sustained a heart attack, perceived and regarded their health and recovery. By exploring these perceptions further, through using qualitative methods, particularly one to one interviews, insights could be generated about how health and ill health is socially, culturally and spatially produced. At the same time that these new, more inductive research questions were being generated, the researcher's principal supervisor took up another employment opportunity which necessitated a change in supervisor. The new supervisor, experienced in qualitative research, encouraged and provided the researcher with an opportunity to develop and extend the research in this manner, shifting and evolving the research to include a significant qualitative component. The qualitative phases of this research will be outlined in detail below.

## The qualitative methodology

Methods that allowed articulations and interpretations of the underlying processes and mechanisms for men's and women's experiences of their heart attack and recovery were crucial in the third phase of the research. By combining methods, knowledge gathered can be more complete and can inform not only theorising around these issues, but contribute to health practice (Johnson and Onwuegbuzie, 2004). Disadvantages of adopting a mixed method approach include the difficulty of a single researcher conducting different forms of research, learning about methods in such a way as to make combining them appropriate, and that mixed method approaches can be time consuming and expensive (Johnson et al., 2007; Johnson and Onwuegbuzie, 2004). In this research, using mixed methods served the purpose of outlining variations of coronary heart disease which were initially identified quantitatively and then allowing further interrogation via qualitative methods with the hope of adding insights and understandings which would not have been possible if only one method was used. Mixing approaches can also address shortcomings of data collection by means of one method with another which can address any imbalance. For example, open-ended questions may be included in quantitative questionnaires, or quantitative information can be collected during interviews or focus groups. This can be done if the study design is flexible enough to accommodate an iterative approach to data collection. Nevertheless, according to Graham (1999, p79), "sources of information can *become* research data when researchers identify them as useful (theory) and develop ways of using them (method). Thus data, method and wider theoretical ideas are intimately linked."

The overall *theoretical drive* (Morse, et al., 2006) of this research was, in the main, inductive and interpretative, and although quantitative methods were used in the initial stages of the research, the overall mode of inquiry was grounded in the socially constructed knowledge claims of the research participants which sought to emphasise the meanings of their experiences and their constructions and interpretations of how they interact within the social worlds within which they live. Qualitative methods provide detailed understanding of people and their experiences and the importance of these

methods of research has been widely acknowledged (Barbour, 1999; Finlay, 2002). The qualitative paradigm is based on interpretivism and constructivism (Guba and Lincoln, 1994). Mixed method research has a wide range of philosophical underpinnings as well as methodological techniques and practices. Common elements of mixed methods research can include using qualitative methods which, across various disciplines, embrace viewing the social world less as a place with 'facts' but rather as where multiple social realities are constructed, experienced, interpreted, produced or constituted. Social realities are socially constructed and constantly in flux and epistemologically, there is no access to reality independent of individual's minds. As such, the researcher and object of study are dependent and co-create findings in the context of the situation, which in turn, moulds the inquiry (Guba and Lincoln 1994). The process in this type of qualitative inquiry is concerned with incorporating techniques which seek to produce explanations and arguments that may not be generalisable but which can offer wider resonance on the social phenomena being investigated (Mason, 2002). Interpretations of these lifeworlds are best explored by methods in which participants are free to express themselves and include ethnographies, case studies, focus groups and in depth interviews (Creswell, 1998; 2003). Samples are usually selected purposively on the basis of providing rich, nuanced, contextual data rather than being representative of large populations (Sale et al., 2002). By investigating the social world and behaviour of individuals, research which uses these methods highlights the formation and structures of common sense and taken for granted life experiences which give meaning to actions and beliefs. This socially constructed knowledge emphasises the meanings people attach to their experiences, which are constructed by people where they interact with the world in which they live. Meanings and interpretations of experiences then can be multiple. Therefore, it is common in this type of research to study a smaller number of participants so that patterns and understandings of meanings can be developed (Moustakas, 1994; Mason, 2002). This research was carried out within a constructivist and interpretivist paradigm which was appropriate in order to discover men's and women's perceptions of, and the meanings they attached to, their experiences of heart attack and recovery. In order for these views to be brought to the fore, interviewing patients one to one was deemed the best method to use. In addition, staff involved in providing cardiac care, particularly in the recovery stages in the form of cardiac rehabilitation, were also interviewed in order to

explore their views regarding differences between those patients who attend and do not attend, whether they perceived there to be neighbourhood effects on health, and the extent to which they perceived that these may impact upon patient recovery. These meanings were then interpreted taking into account the demographic, geographical and socio-cultural context of the participants.

## Preparations for conducting the research

The forthcoming sections of this chapter will outline how the qualitative stage of the research was conducted beginning with the important ethical considerations involved in research of this type. The procedure for sampling and the recruitment of both patient and staff participants will be outlined.

### *Ethical procedures and ethical considerations*

The study was approved by both the School of Geography and Geosciences University Teaching and Ethics Committee (UTREC) (Appendix 1) and the East of Scotland Research Ethics Service, part of NHS Fife, NHS Forth Valley and NHS Tayside (Appendix 2). All research is required to abide by proper ethical standards which include informed consent, anonymity and confidentiality. This research conformed to the UTREC ethical procedures but additionally because of the specific issues addressed in this project centring on exploring experiences and perceptions from both heart attack patients and staff, the main ethical considerations identified related to the safety and well-being of the participants. These issues were paramount and because NHS patients were to be involved in the research, NHS ethical approvals were required.

The NHS Ethics application process is a very detailed, rigorous procedure, and as such ethical considerations within this study were at the fore during the design, conduct and analyses stages of the research. Tinker (2001) has outlined that ethical procedures are more than a bureaucratic necessity and allow opportunity for discussion, scrutiny and reflection with others not directly involved in the research. The researcher had the opportunity to appear before the NHS Research Ethics committee and this option was taken. By choosing to present in person to the committee (it is not obligatory), application

issues and potential delays could be mitigated and the meeting acted as a forum for research clarification and discussion. This committee meeting took place on the 17th September 2009 and the process of applying for NHS Ethical approval and attending the committee meeting provided an opportunity for the researcher to critically reflect on the research design and ensure that the project was ethically robust and appropriate. Both the UTREC ethical procedure and NHS Research Ethics application were successful and favourably approved.

Due to the nature of being a University postgraduate student, funded by the NHS, separate NHS Fife Research and Development approvals were also required. A change in research protocols meant that unfortunately a three month delay to patient recruitment was experienced. The 'letter of access' from NHS Fife Research and Development was granted (Appendix 3) certifying that all necessary checks and approvals were in place. The research was also defined via the NHS ethics application process as interviewing vulnerable adults, thus an Enhanced Disclosure Scotland criminal record check was required for the researcher and this was obtained. Due to a number of unintended impediments such as a change to protocols in NHS Research and Development processes and the impact of the cardiac rehabilitation service re-design during the fieldwork period (October 2009-September 2010), the Ethics application which initially included dates for fieldwork from October 2009 to June 2010, had to be augmented. A minor amendment was required to be submitted to the Ethics committee for a change in patient recruitment dates which was extended until September 2010.

The main ethical considerations for this PhD related to patients being interviewed. The patient participant research interviews were conducted in their own homes. The rationale for this was to minimise the inconvenience and upheaval for the participants, some of whom were poorly and still recovering from their recent heart attack. In addition, it was considered that it was more comfortable for the participants to be in an environment in which they felt safe and relaxed, especially as the interview might provoke sensitive, emotional reactions. Through exploring their perceptions, beliefs and attitudes regarding their recent coronary heart disease event in a one to one interview situation, there was the risk that some of the topics and themes discussed during the course of the interviews

might be potentially upsetting or distressing. With any piece of qualitative research work there is always this risk to participants and in this research there was a potential for sensitive issues to arise, particularly when discussing recent health events which could be traumatic and anxiety provoking for participants. A heart attack can be viewed as an extremely personal, sensitive issue which raises myriad perceived or real threats to life. Topics deemed sensitive are those which may be intimate, discreditable or incriminating' (Lee & Renzetti, 1993) and for social and health researchers, often the research being conducted may fit into one or more of these definitions. In the case of this research, exploring participants views and perceptions about their experiences of heart attack and varying degrees of engagement with cardiac rehabilitation, could fit in with these descriptions. Some types of research which may be considered sensitive can invade what is called the 'private sphere.' In the case of this research, the private sphere was not only the participants' private experience i.e. their physical, emotional and psychological accounts of their recent heart attack which ordinarily might be kept private, but also the private spheres of their homes, where the research was conducted.

This research covered topics which touched on aspects of death and dying and for some participants recounting the heart attack experience was a deeply frightening and emotional experience. For the researcher, sensitivity to the participants' psychological needs during the interview was crucial. It has been stated by Minichiello et al., (2008: 86) that "if we accept that in-depth interviewing necessitates establishing and maintaining good rapport with informants then it should also be recognised that such a process is never devoid of some form of emotional commitment from both sides of the fence." This is a view with which this researcher concurs, but it is not one without risk. Despite the fact that the researcher has a background in psychology and has been employed on a number of health and social care research projects in the past, the breadth and number of participants being interviewed who were recounting their 'private' stories demanded a degree of self-disclosure not previously experienced. Goffman (1973: 178) has termed this process the "mortification of self" whereby both researcher and researched disclose parts of themselves to help build reciprocity and trust and inadvertently their own selves are rendered vulnerable. On reflection, some of the interviews were an emotional and stressful experience for both the participant and the researcher and particularly during

the ‘tougher’ interviews the researcher was able to provide only reassurance and a sympathetic ear as an aid or comfort to participants.

*Emotional risk*

Previous research has outlined that feelings of guilt can occur after the research relationships have come to an end (Burr, 1996; Cannon 1992) and in the case of this research this was experienced by the researcher, particularly as a number of participants died during the fieldwork period (Cannon, 1989; 1992). This research blurred the private and public domains of the researcher/researched at times in numerous ways. Assessing and mitigating the potential harms or risks to the participants was an inherent part of the ethical considerations which underpinned this research. On reflection, the socially and relationally produced information generated during these interviews incurred an emotional risk for the researcher also. The dynamic and interactive nature of this type of qualitative health geography research that can include emotional risks for the researcher is not often developed, nor fully accepted by the research community (Dickson-Swift et al., 2008). The impact of undertaking this type of research generated through people’s own words, can tell health geographers a great deal about people’s experiences and attitudes and it can also reveal key underlying social structures, including inequalities, exposing varying degrees of hardship, vulnerability and fear. The emotional risk to the researcher of this type of research endeavour is absent in the formal ethical applications required by both University and NHS ethics committees. It is this researcher’s assertion that the risk to the researcher should be included in these applications with processes and procedures for emotional support during fieldwork being recognised and stipulated within formal ethical applications.

*Informed consent*

The potentially sensitive nature of information generated during qualitative research and from this research in particular, makes gaining informed consent from participants a key focus, as well as a legal and ethical requirement for research projects involving human participants. Informed consent is defined as “the process of agreeing to take part in a study based on access to all relevant and easily digestible information about what

participation means, in particular, in terms of harms and benefits" (Parahoo, 2006). The information required to be provided to patients to make a decision and give informed consent were taken from the Royal College of Nursing (2005) which cites the following elements in Figure 1 below;

**Figure 1: Royal College of Nursing Informed Consent principles**

- Participants should have information about the purpose of the research and their role in it if they agree to participate
- How long the research will last , what is involved and who is involved
- The procedures and practicalities involved and the possible benefits or risks of participation
- How the data collected will be managed and utilised
- The voluntary nature of participation
- Their right to withdraw at any time without stating a reason or without their future treatment being compromised
- Details of the research funders, the sponsor and the ethics committee who approved the research
- Contact details of a relevant party if further information is required

These points were incorporated into both the patient participants letter of invitation and information sheet (Appendix 4 and 5 respectively) and consent form (Appendix 6) and the staff participants letter of invitation and information sheet (Appendix 7 and 8 respectively) and consent form (Appendix 9), written in appropriate language without technical or jargonistic terms. As informed consent is an on-going process, participants who had signed consent forms were also asked to verbally consent at different stages throughout the research process; when the interview was being arranged over the telephone and again at the beginning of the interview when the digital recorder was switched on. The researcher outlined to the participants that the research could be terminated at any point, that any consent given on information provided could be removed and the data (in this case the recorded interview) would be destroyed. The participants were assured that any information they gave would be treated with the utmost confidence and anonymised.

*Confidentiality*

The confidentiality of research participants' information is another key ethical and legal imperative both during and after the research. This takes a number of forms. Confidential information gathered during this research was and remains securely stored in locked filing cabinets and on password protected computer files accessible by the researcher only. Information that was required to be shared and discussed with the researchers' supervisory team, as part of the supervisory relationship, was also approved ethically and consent was obtained for this purpose. Full transcripts are stored securely in a locked filing cabinet in the University, and will be held for 5 years after the completion of the research project. Both patient and staff participants' anonymity was ensured through the use of pseudonyms. This was an important aspect of this research, particularly concerning staff participants as there were small numbers of cardiac rehabilitation staff in Fife who could be easily identified therefore it was important to use pseudonyms. Patient participants were also given pseudonyms and these are outlined in Appendix 10 in addition to participant demographic detailed information. Staff pseudonyms are provided in Appendix 11. The responsibility for development of the pseudonyms as well as other potentially identifiable participant information lies solely with the researcher, and these were stored on a password protected computer accessible only by the researcher.

*Researcher safety*

Other ethical considerations included the safety of the researcher. As stated previously, the interviews were conducted in the homes of the patient participants. Participants were sampled from across Fife, and many of the areas were unfamiliar to the researcher. Interviews were sometimes conducted at night due to the need to be flexible and arrange interviews at convenient times for the participants. In order to minimise the risk to the researcher, details of patient participants to be interviewed, the timings and place of interviews were relayed to the supervisors in advance. On the actual day of interview, the researcher most commonly informed a family member when and where the interviews were taking place and texted to confirm that she had concluded the interviews and had returned safely home.

## Participant recruitment and conducting the research

The next section outlines recruitment of both staff and patient participants respectively. Inclusion and exclusion criteria are outlined for both sets of participants. The sampling strategy for patient participants is discussed in further detail. Information regarding conducting the interviews is shown including discussion of the qualitative pilot study which was undertaken with a number of patient participants. In addition, a timetable of the research is provided.

*Staff recruitment*

Staff were included in the research for a number of reasons. Firstly, the cardiac rehabilitation service was a clinical priority for NHS Fife and including staff in the research would enable professional views regarding the patient groups who attended and who did not attend to be highlighted. Many of the cardiac rehabilitation staff had been influential in guiding aspects of the research design, especially during the earlier stages when multiple discussions and meetings (informal and formal) were organised with the researcher to discuss possible research designs and to hone the focus of the research. It was therefore imperative to include staff perspectives on a range of issues pertinent to the overall research questions and cardiac rehabilitation engagement in particular. Staff were recruited through the Managed Clinical Network for Coronary Heart Disease in NHS Fife and after the initial contacts were made, further contacts were obtained from these personal recommendations. All staff who were contacted and many of whom were involved in formal and informal discussions through the process of the PhD, were involved in the organising, delivery and development of cardiac rehabilitation services for coronary heart disease patients in NHS Fife. Staff were identified and contacted via letter (Appendix 7 and 8) and invited to participate in a qualitative one to one in depth interview. A consent form (Appendix 9) was attached to the staff information sheet and a stamped addressed envelope was included for the staff member to return the consent form to the researcher to confirm if they would or would not be prepared to take part. Upon receiving this consent form, the researcher then contacted the staff member at their place of work, using the telephone number provided by the staff member and asked

them to verbally consent to taking part. The interview was then arranged on a convenient date and time at the staff member's place of work, most commonly NHS Fife premises across the region. The staff member was provided with a reiteration of what was to be discussed during the forthcoming interview and an opportunity for any further questions was given both on the telephone and during the interview itself. Written consent was obtained from the staff member at the outset of the interview. Further information about the study was provided, as well as the contact details of the academic supervisors and clinical supervisor.

*Undertaking the staff interviews*

All staff participants (n =8) were interviewed once. Staff participants were reminded at the beginning of the interview about their rights related to confidentiality and anonymity. This was important as the sample size of the cardiac rehabilitation staff was small (n=8). All staff interviews were conducted by the researcher and the interviews were digitally recorded.

The staff interviews took place between February 2010 and April 2010. The interview schedule for staff (appendix 12) included questions which mirrored those for the patient participants notably questions about cardiac rehabilitation and neighbourhood issues. Importantly, staff were asked to theorise if they perceived differences between attenders and non-attenders and to provide probable social, geographical and behavioural reasons for these differences. Staff were asked to outline their employment role in relation to cardiac rehabilitation and how long they had been employed in CR. The rationale for these questions was to develop further insights about patient attendance at CR services through staff perspectives and to understand what implications these may have for delivery and planning of CR services for different population groups.

*Patient participant recruitment*

The next section outlines the sampling strategy for patient recruitment including inclusion and exclusion criteria. A small pilot study was conducted to 'test' out the interview

schedule and this is discussed below. Detailed information is provided about conducting the remainder of the patient interviews.

It is important to highlight here that the evolving methodologies used in this research had an impact on sampling. The sampling of participants was influenced by the quantitative phase of the study further outlined in Chapter 4. Sampling participants by their area of residence was of prime importance but an additional sampling consideration was whether participants engaged with cardiac rehabilitation or not. A purposive sample of 60 patients who had sustained a heart attack was sufficient for inclusion in this research. Purposive or theoretical sampling requires selecting groups on the basis of their relevance to research questions, theoretical position, the analytical framework and to develop the research argument (Glaser and Struass, 1967; Strauss, 1987; Corbin and Strauss, 1990). The theoretical sampling in this research was twofold. It was based on the geographical variations of coronary heart disease observed across different 'industrial' areas in Fife therefore interviewing patients from these areas would provide information about neighbourhoods, perceptions of health and understanding of health and ill health including behaviours, beliefs and attitudes towards their heart attack and recovery. In addition, patient participants were sampled by whether or not they were attending cardiac rehabilitation. Sampling included both male and female patients of various ages. Below, table 4 outlines the desired sampling frame.

**Table 1: Projected patient participant sample**

| Cardiac rehabilitation | Mining area | Non-mining area – deprived | Non-mining area affluent |
|---|---|---|---|
| Attender | 10 | 10 | 10 |
| Not attender | 10 | 10 | 10 |

Appropriate to a qualitative research design, the sample was not intended to be representative of the population as a whole but to comprise as diverse a range of patients as possible whilst being mindful of the sampling criteria. Theoretical considerations influenced the sampling criteria and obtaining patients from each of the above sub-groups was important. The selection of patient participants, by virtue of their

geographical area and attendance or not at cardiac rehabilitation, would provide a variety of experiences about heart attack and recovery throughout the research interviews. The final achieved sample is outlined in the table below. Samples of between twenty to thirty respondents are considered adequate for qualitative studies (Kuzel, 1992) with the goal of sampling not to provide a representative population sample, but rather to reflect diversity and provide as much potential for comparisons between groups as possible (Mays & Pope, 1995; 2000). Gender emerged throughout the research as an important analytical consideration. However, the original intention was to sample on the basis of neighbourhood and attendance or not, thus there are more male participants than female participants in the final sample. This occurred because more men were admitted to hospital with heart attack during the study period, therefore there were more males from which to select a sample.

**Table 2: Final sample of patient participants**

| **Cardiac rehabilitation** | **Mining area** | **Non-mining area (deprived)** | **Non-mining area (affluent)** | **Total** |
|---|---|---|---|---|
| **Attender** | 6 males<br>2 females | 5 males<br>1 female | 7 males<br>1 female | **22 attenders**<br>(18 males)<br>(4 females) |
| **Non-attender** | 6 males<br>3 females | 6 males<br>3 females | 9 males<br>1 female | **28 non-attenders**<br>(21 males)<br>(7 females) |
| **Total** | **17 participants** | **15 participants** | **18 participants** | **50 total** |

Data was collected primarily via in-depth one to one qualitative interviews. Patient participant's demographic and personal profile information was collected using a researcher designed questionnaire which was completed at the start of each interview and from which the interview schedule followed (Appendix 13). The tables below

highlight some of the main characteristics of the patients interviewed especially their neighbourhood type, whether or not they had a previous MI and the age of participants. The tables have been segmented into male participants – attenders at CR; male participants – non-attenders at CR and female participants – attenders and non-attenders.

**Table 3: Male participants – attenders**

| Name | Age | Sex | Area | Previous MI | attender | non-attender |
|---|---|---|---|---|---|---|
| **BRUCE** | 69 | M | MD | | √ | |
| **GREG** | 48 | M | MD | | √ | |
| **IVAN** | 68 | M | MD | | √ | |
| **RAY** | 60 | M | MD | | √ | |
| **WILFRED** | 69 | M | MD | | √ | |
| **WILSON** | 49 | M | MD | | √ | |
| **DEREK** | 64 | M | NMD | | √ | |
| **JASON** | 48 | M | NMD | | √ | |
| **MALCOLM** | 61 | M | NMD | | √ | |
| **SAMUEL** | 64 | M | NMD | | √ | |
| **WILLIE** | 76 | M | NMD | | √ | |
| **ALBERT** | 54 | M | NMA | | √ | |
| **ALEC** | 73 | M | NMA | yes | √ | |
| **ALISTAIR** | 81 | M | NMA | | √ | |
| **CHRISTOPHER** | 57 | M | NMA | | √ | |
| **JACK** | 66 | M | NMA | | √ | |
| **PAUL** | 62 | M | NMA | | √ | |
| **PETER** | 58 | M | NMA | | √ | |
| **PHILIP** | 66 | M | NMA | yes | √ | |

**Table 4: Male participants : non- attenders**

| Name | Age | Sex | Area | Previous MI | attender | non-attender |
|---|---|---|---|---|---|---|
| **ANDREW** | 76 | M | MD | | | √ |
| **GAVIN** | 60 | M | MD | | | √ |
| **FERGUS** | 61 | M | MD | | | √ |
| **KEITH** | 47 | M | MD | | | √ |
| **WALTER** | 67 | M | MD | | | √ |
| **RALPH** | 56 | M | MD | | | √ |
| **BILL** | 49 | M | NMD | | | √ |
| **DONALD** | 74 | M | NMD | | | √ |
| **ISAAC** | 56 | M | NMD | | | √ |
| **JOE** | 74 | M | NMD | | | √ |
| **NEIL** | 69 | M | NMD | | | √ |
| **REG** | 74 | M | NMD | | | √ |
| **ADAM** | 44 | M | NMA | | | √ |
| **DANIEL** | 74 | M | NMA | yes | | √ |
| **DOUGLAS** | 74 | M | NMA | yes | | √ |
| **HAMISH** | 77 | M | NMA | | | √ |
| **JAMES** | 77 | M | NMA | yes | | √ |
| **JUDE** | 66 | M | NMA | | | √ |
| **LAURIE** | 59 | M | NMA | | | √ |
| **WINSTON** | 67 | M | NMA | yes | | √ |

**Table 5: Female participants: all attenders and non-attenders**

| Name | Age | Sex | Area | Previous MI | attender | non-attender |
|---|---|---|---|---|---|---|
| **CAROL** | 75 | F | MD | | √ | |
| **MAUREEN** | 68 | F | MD | | √ | |
| **ALISON** | 64 | F | NMD | | √ | |
| **VIVIAN** | 54 | F | NMA | | √ | |
| **CELIA** | 57 | F | MD | | | √ |
| **HELEN** | 66 | F | MD | | | √ |
| **LAURA** | 58 | F | MD | | | √ |
| **ELSPETH** | 73 | F | NMD | yes | | √ |
| **LENA** | 62 | F | NMD | yes | | √ |
| **JUNE** | 50 | F | NMD | | | √ |
| **ADA** | 66 | F | NMA | | | √ |

*Inclusion and exclusion criteria*

In order to gain consent to interview the participants and as a condition of ethical approval, patients were recruited from the Coronary Care Unit (CCU) at Victoria Hospital, Kirkcaldy by an experienced nurse. The nurse recruiter was able to approach patients who fulfilled the inclusion and exclusion criteria which were as follows. Patients were included in the overall recruitment sample if they had been admitted to the Coronary Care Unit at Victoria Hospital, Kirkcaldy with a diagnosis of acute myocardial infarction (AMI) or heart attack from 1st December 2009. Males and females of varying ages were recruited. All patients who had sustained a heart attack and who were eligible for cardiac rehabilitation were to be approached about participating in the research (at the discretion of the nurse recruiter). These same patients who were recruited and informed of the study and who had signed the informed consent form and included their address and phone number, were contacted by the researcher by telephone approximately 6-8 weeks later. At that point, the patients were most likely to have been assessed for Phase 3 cardiac rehabilitation. Between December 2009 and end of June 2010 when recruitment ceased,

more than 230 patients had been admitted with an AMI. Of these, the nurse recruiter managed to recruit 95 patients. Of these patients, fifty were interviewed for this research. As a condition of ethical approval it was deemed inappropriate for the researcher to approach patients who had recently sustained a heart attack. The researcher is not medically trained and therefore a relationship which proved crucial to the success of this research was the one which developed with the nurse recruiter.

The nurse recruiter was a senior charge nurse on the ward with detailed experience and knowledge of research procedures gained from recruiting patients for clinical trials. Although this study was not clinical in nature, the knowledge of recruitment protocols and associated administrative tasks pertaining to informed consent, confidentiality and ethical guidelines was understood and actioned on the researcher's behalf, on the ward, by the nurse recruiter. The nurse recruiter, being a trained health professional, was also able to identify those who had sustained a heart attack for inclusion into the research. The principle exclusion criteria were patients below the age of 30 and above the age of 80. Patients who were younger were unlikely to sustain an AMI and patients older than 80 may have multiple co-morbidities preventing them from physically being able to participate and attend cardiac rehabilitation at phase 3 which usually requires using gym equipment. Patients were excluded if the clinical criteria (as identified by the nurse recruiter) dictated other health contraindications for non-attendance. Patients were excluded if they had been transferred to tertiary care for any reason, between Phase 1 consenting (in the CCU, Victoria Hospital) and Phase 3 (some 6-8 weeks later). Patients were excluded if they had passed away between Phase 1 and Phase 3. Many of these exclusionary criteria were developed in conjunction with the nurse recruiter and with the cardiac rehabilitation staff.

*Recruiting patient participants*

The process of patient recruitment was a collaborative affair which required the nurse recruiter to approach patients shortly after they had been admitted with a heart attack on the ward of the CCU at Victoria Hospital, provide information about the research study

in the form of a patient information sheet (Appendix 5) and obtain informed consent via a patient participant consent form (Appendix 6).

The researcher attended Victoria Hospital, Kirkcaldy at agreed regular intervals during the patient recruitment period (from 1st December 2009 to 30th June 2010) to discuss progress with the nurse recruiter and address any issues arising with the recruitment process. Also, additional copies of the patient information sheet and consent form were supplied in order to minimise the nurse recruiter's administrative work load. Completed informed consent sheets were collected by the researcher and included the patients' addresses and telephone numbers. From these consent forms, the researcher was able to legitimately and ethically contact patients and also 'place' each patient into the categories required in the sampling frame i.e. whether the patient was an attender or non-attender at cardiac rehabilitation Phase 3 and in which 'industry' area they resided. There was often a six to eight week lag from the date of patient recruitment to the research interview and the patient participant commencing Phase 3 cardiac rehabilitation, therefore, the researcher had to liaise with the cardiac rehabilitation team in addition to the nurse recruiter to ascertain whether the patient participant was indeed attending cardiac rehabilitation or not.

*Challenges with patient participant recruitment*

Due to a number of unintended delays (change of protocols in NHS Research and Development processes and the impact of the cardiac rehabilitation service re-design which occurred during the fieldwork period (which included the recruitment stage also)) the number of patients recruited was reduced from 60 to 50. An aspect of qualitative research which is part of being a reflective researcher requires being flexible with regard to data collection and within this research, being adaptive and responsive to the demands of this extra work load burden on the nurse recruiter. In combination with the cardiac rehabilitation service re-design which was occurring during the fieldwork period, the lag time from patient recruitment to interview (and attendance or not at CR) was becoming longer for some of the patients. Interviews were thus occurring sometimes nearly two months post initial recruitment. It was felt necessary to conduct and complete the

interviews before the end of August 2010, in part, to minimise the demands on the nurse recruiter and also due to the researcher taking a leave of absence from 1st September 2010. Therefore, the patient recruitment ceased towards the end of June 2010. However, the nurse recruiter managed to recruit a total of 95 patients from December 2009 to June 2010. From this larger sample, the final 50 patients interviewed were drawn.

The next stage in the recruitment process required calling the patient at home to reconfirm their desire to participate in the research and if this was affirmed, an interview was arranged at an appropriate time for them, at their home address.

## The interviews

In this section information about the interviews will be discussed. In particular, the interview schedule which was used for interviewing and how this was developed and 'tested' in the preliminary pilot interviews will be highlighted followed by a discussion of the remaining patient and staff interviews. Transcription and coding of the interviews will be discussed, as well as the analysis of the interviews.

*Devising the interview schedule*

The patient participant interview schedule (Appendix 13) was developed by the researcher and included various questions related to health experiences, neighbourhood influences on health, perceptions about their recent heart attack and questions regarding cardiac rehabilitation. The cardiac rehabilitation section was divided into separate sections for those who were attending CR and those who were not and each relevant section was used accordingly depending on the participant's engagement.

The interview schedule also incorporated a questionnaire entitled the Brief Illness Perception Questionnaire (Broadbent et al., 2006). This 8 point questionnaire assesses the cognitive and emotional representations of illness and is often used to determine the patient's illness perceptions. The researcher was intending to ask questions about illness perceptions and this questionnaire proved a useful inclusion. Using a Likert scale from 0 to 10 to assess the strength of various dimensions such as identity, consequences, cause,

timeline and cure or control, illness perceptions were gathered. The results outline predictive validity in patients for mental and physical functioning. This brief questionnaire was used within the interview setting and scores were gathered for each patient on each of the dimensions. It was not the intention to primarily use this questionnaire for the purpose of 'scoring' the participants or for producing quantitative results on this basis, however quantitative analyses using this questionnaire were undertaken and key results will be presented in Chapter 5. The use of this questionnaire was influenced by the initial quantitative focus of the research and also because this questionnaire had been successfully validated in patient groups numbering approximately 50 patients with various conditions, including coronary heart disease (Broadbent, et al., 2006). As this research became more concerned with seeking meaning and experiences, incorporating this questionnaire into the interview allowed the participants to not only scale their responses to the various dimension questions, but it also allowed the researcher to follow up their scaled responses by prompting participants with further, open ended questions allowing greater exploration about detailed aspects of their condition, how it was affecting their identity, the consequences their heart attack was having for their lives, its perceived cause and their level of control over it. These questions also provided an important opportunity to ask participants what they perceived to be the most important factors implicated in causing their heart attack.

*The pilot patient interviews*

Prior to commencing the majority of the patient participant interviews, a small pilot study was conducted with three patient participants during early March 2010 to practise the interview schedule and make necessary adjustments. Pilot studies are most notably conducted in survey work (Parfitt, in Flowerdew and Martin eds. 2005) but in this research, understanding the average length of the interview time, the flow of the interview and participant understanding of the questions was an important part in planning the remaining fieldwork. Many of the research participants were still recuperating at home and a very long interview might have proved too tiring for some. The pilot study thus allowed an opportunity to check whether questions and underlying concepts were worded appropriately and fully comprehended by the participants. It also

allowed an opportunity for feedback from the pilot study participants on the type and order of questions. These comments proved useful and upon reflection, the schedule was augmented to take into account this feedback prior to commencing the remaining interviews.

*Interviewing patient participants*

All patient participants (n = 50) were interviewed once during the course of the fieldwork. Interviews lasted from around 40-80 minutes and took place between March 2010 and the end of July 2010. The researcher conducted the interviews in the homes of the participants who were located across different parts of Fife. Similarly with the staff interviews, all patient participant interviews were digitally recorded and transcribed. The interviews were often organised in or around similar locations in Fife. Multiple interviews were conducted on any given day, ranging from two to four interviews. The experience of conducting three or more interviews per day with the associated driving and locating the participants, made the researcher reflect that optimally, two to three interviews with ample driving and break times was necessary, not least from an attention point of view, but given the sensitive and personal nature of the interview subject, some of the 'stories' were emotionally challenging.

From the pilot study, it was imperative to allow enough time to find the patient participant's address to ensure that the researcher arrived on time. Establishing rapport with the participants was key and although the researcher and the participant had chatted on the phone to organise the interview date and time, this was the first face to face contact between the participant and the researcher and first impressions were of prime importance. Establishing rapport with the participants had to occur fairly quickly in order to facilitate disclosure and engagement during the interview. A general chat usually occurred at the outset prior to the interview commencing. Often, the researcher was offered a "cuppa" and these preambles allowed the researcher to organise the digital recorder and informally answer any questions the participant may have had before the interview started. This period of time broke the ice and gave an opportunity for the participant to "size the researcher up". Many of the participants were curious about the

research (and the researcher) and often did not believe they had anything special to contribute, or on the other hand were pleased to be allowed an opportunity to get things off their chest. Some participants felt that if it was going to help others, it was a worthwhile thing to do. The interview schedule included opening questions about the participant, what they liked to do in their spare time, hobbies they had and their general weekly routines. These questions were asked initially to break the ice and to put the participant at ease.

A timetable of the overall study, including ethical processes, participant recruitment and fieldwork is outlined below in table 6 below to show the overall progression of the research undertaken.

**Table 6: Timetable of the PhD research process**

| | |
|---|---|
| October 2007 – May 2008 | Literature reviewing; collection of quantitative data and meetings with NHS Fife staff |
| June 2008 – December 2008 | Census and health data procedure and analysis; preliminary qualitative research design |
| January 2009 – August 2009 | Qualitative research procedure developed in conjunction with CR staff; Ethical applications completed and gained |
| September 2009 – December 2009 | Ongoing discussion with NHS staff about research design and patient recruitment. Final R&D approvals granted; patient recruitment commences; staff contacted for interview participation |
| January 2010 – August 2010 | Interview study including qualitative pilot. Patients and staff interviewed in Fife; transcribing and initial analyses. |
| September 2010 – April 2011 | Leave of absence |
| May 2011 – August 2012 | Reviewing transcription, input and coding into Nvivo, paper based coding, further analyses and writing up. Submission 10th August 2012. |

## Methods of qualitative data analysis

*Transcribing and coding*

All staff and patient interviews were transcribed fully verbatim. All staff interviews (n=8) were transcribed by the researcher. Twelve of the fifty patient interviews were transcribed by an approved and reliable transcription company which signed a confidentiality statement prior to undertaking the work. The company had been used by the researcher during a previous employment role and was experienced in transcribing for academic purposes. The researcher decided to outsource this transcription for a number of reasons. Firstly, extra finance was applied for by the researcher and granted from NHS Fife to pay for this administrative work. At this time, the researcher was on a leave of absence from her PhD studies to undertake full-time employment. By securing the transcribing assistance it allowed the researcher to progress with coding and preliminary analyses during her leave of absence, expediting her progress prior to resuming full-time PhD studies again in May 2011.

All participant interviews were subject to thematic analysis using a grounded theory approach originally developed by Glaser and Strauss (1967) and (Glaser, 1978; Strauss, 1987). They have outlined grounded theory which is shown in Figure 2 below as:

**Figure 2: Principles of grounded theory**

- Simultaneous involvement in data collection and analysis
- Constructing analytical codes and categories from data, not from preconceived logically deduced hypotheses
- Using the constant comparative analysis which involves making comparisons during each stage of the analysis (on paper and using Nvivo)
- Advancing theory development during each stage of data collection and analysis
- Memo-writing to elaborate categories, specify their properties, define relationships between categories and identify gaps
- Sampling aimed toward theory construction, not for population representativeness

An influential theory, grounded theory, has been adopted by many authors since its inception, particularly Charmaz (1995; 2003; 2006), who states that it principally allows

researchers to learn about the worlds studied and acts as a method for ways to understand such worlds. Charmaz, unlike Glaser and Strauss, believes that neither data nor theories are discovered, but that grounded theory is an inductive, comparative and interactive approach to inquiry, influenced by past and present involvement and interactions with people, perspectives and research practices.

Data analysis is a challenging and on-going process which occurs in various forms throughout the whole research process. Initial analytical ideas and identification of associations occurred during the interviews and during transcribing when initial thoughts and connections were being made. After transcribing, the interviews were read and re-read multiple times to identify similarities between what the participants had said. Initial coding was done on the paper transcripts by the researcher in the preliminary stages to re-establish familiarisation with the data. Initially, themes were identified and cross checked in the staff interviews for similarities and differences and refined into themes and sub-themes. Using as a guide the interview schedule which had ordered groups of similar questions together (although the interviews did not necessarily follow the questions in a linear fashion) which were conceptually related, these themes were scrutinised in more detail to identify the layers emerging within each theme. Categories within the themes were defined and relationships between themes began to emerge. Simultaneously, themes were broken down to include sub themes and an overall analytical structure was developed. In both the staff and patient interviews, information which differed or which was anomalous was compared to the main themes and sub-themes. This in turn further helped refine the patterns emerging in the data and the interpretations produced. By constantly comparing information and being receptive to what was emerging from the data, the properties and variations in the data were fully examined and scrutinised, using Nvivo and paper based thematic coding.

It was important to be mindful of preconceived ideas and expectations of the data but by continuing this process of constant comparison throughout the coding, analysis and write up stage, further insights were gained which were grounded in the data itself. The sample was originally intended to account for neighbourhood (“mining deprived”, “non-mining deprived” and “non-mining affluent”), as well as whether participants engaged with

cardiac rehabilitation or not. Using a grounded theory approach allowed further analytical categories within these larger themes to emerge and connections to be made. In particular during the analysis, gender emerged as an important analytical category. Although gender was an interesting dimension which emerged in importance during the analyses, it was not paramount in the original sampling strategy, thus there were unequal numbers of men and women sampled for interview. In part, this was also due to more men being admitted to hospital for sustaining a heart attack during the study period which therefore limited the numbers of women available to be recruited. However, throughout the analyses, gender emerged as a "new idea" which could improve the analytical interpretations of the data. Thus, the data were revisited and recoded using gender as a category. Charmaz (2006: 122) has outlined that this can "expedite theoretical sampling of a new category" and throughout the whole data collection and analysis process, analytical notes were being kept in a variety of forms. Detailed notes in the form of research diaries for both patients and staff were kept during the data collection stage and an analytical notebook was kept which aided the coding and analysis process. Using A1 sheets of paper, pasted onto walls, with coloured highlighters provided an opportunity to visually represent the associations between themes and their underlying theoretical and conceptual links. The researcher often used these visual aids to discuss the developing ideas and analytical categories and justifications with her supervisors.

Following training in the use of QSR Nvivo software version 7, this was used to manage and organise the patient transcriptions. It was appropriate to use this software due to the volume of data which had been generated throughout the patient interviews. The transcripts were uploaded into Nvivo and initial coding commenced highlighting text which related to the main themes which were covered in the patient interview schedule. This provided a broad framework with which to start the process of coding. Once all the interviews were coded using these broad themes, the transcripts were read and re-read and tree nodes were most often used to identify different layers of sub-themes which emerged from the data. The process used in Nvivo is similar to that outlined above. New themes emerged from comparing and contrasting transcripts and new coding categories were developed.

Nvivo allows the user to organise data in different ways once it is coded, which aids analysis. In this case, organising relevant transcripts into cases and sets allowed the researcher to compare across the categories of interest, for example, by attenders or non-attenders and by those from 'mining deprived', 'non-mining deprived' and 'non-mining affluent.' These functions of the programme are versatile and allowed the researcher to more easily manage coding and analysis for this number of interview transcripts. It is a useful tool but it does not replicate or replace the intellectual rigour and attention involved in the analysis of qualitative data. A considerable amount of time was spent conceptualising relationships and associations, coding into Nvivo, going back to the transcripts, listening to the interviews and making visual representations of the analytical links. All these processes were involved in producing the analyses in this research. The process of analysis is a challenging and intellectually demanding aspect of qualitative research. The process of producing "social explanations or addressing intellectual puzzles" (Mason, 2002:173) requires rigorous intellectual and strategic thinking as well being reflexive throughout the whole process. Using qualitative computer software, although useful for information management, does not negate the necessity of immersing and fully familiarising oneself with the data.

## Conclusion

This chapter had outlined that the choice of research methodology is linked directly to the research aims and objectives of the study. Initially the research used quantitative methods which utilised quantitative data collection and analysis which provided evidence outlining differences in coronary heart disease outcomes by place as defined by an area's industrial legacy. Worst health was observed across heavy industrial areas of Fife associated with mining and manufacturing which will be detailed in Chapter 4. In order to understand these variations in greater detail contemporaneously, it was necessary to employ a different methodology to explore the ways in which place shapes health. Underpinning the overall research were philosophical and theoretical considerations which informed the design of the study.

This chapter focused specifically on the third and fourth stages of this mixed methods research which utilised qualitative methods in the form of one to one in-depth interviews with patient and staff participants. The research was conducted in conjunction with NHS Fife and focused on the secondary prevention programme of cardiac rehabilitation by interviewing patients who had sustained a heart attack and staff involved in the delivery, planning and organising of services featured. These methods were used because they allowed participants' socially constructed life worlds to be discovered in detail to understand their interactions and meanings of their heart attack and their recovery (in conjunction with attending cardiac rehabilitation or not). These men's and women's experiences of heart attack will be presented in Chapter 5 and their experiences of recovery and cardiac rehabilitation discussed in Chapter 6. Staff involved in providing cardiac care and rehabilitation for NHS Fife heart attack patients were included in this research so that their experiences and insights into providing care for cardiac populations could be formalised. Through exploring the complex factors which facilitated or impeded patients' ability to attend cardiac rehabilitation, staff perspectives are highlighted in Chapter 7. The findings chapters lead on from Chapter 4 which provides the context about why Fife is an interesting area within which to situate and research health, ill health

and recovery and it will provide further detail about the first and second phases of this research.

# Chapter 4: Accounting for place in health geography: Exploring coronary heart disease in Fife

## Introduction

This chapter will draw together strands of this mixed methods research in order to better account for health in place and clarify the ways that this study has sought to explore coronary heart disease in Fife. It has been stated in Chapter 3 that this study evolved initially from a quantitative study interested in conceptualising the geography of health outcomes (particularly CHD mortality) hypothesised as being worse in areas characterised as de-industrialised. The effects of de-industrialisation on health and well-being in areas associated with heavy industry in particular, such as mining and manufacturing, may well contribute to and explain some of the health variation observed in these types of communities in Fife. This initial stage of research was informed using evidence from other quantitative studies which will be briefly highlighted in the first section of this chapter which will provide a background to place effects on health within de-industrialised areas in England and Scotland, setting the scene for attempting to account for place differences specifically in Fife. The second part of the chapter will describe the research design and results for the quantitative stage of the study. At this point of the study, gathering data to map health outcomes onto areas defined using administrative units and Census data provided a means for characterising areas in Fife using industrial typologies. Understanding what these areal units consisted of and the nature of these places were interesting to map but the results led to thinking more about the characteristics of the populations within these places and the factors which could give populations their characteristics.

In order to understand place more broadly it became apparent that quantitative methods alone may not allow "the nature of the locality and its role in structuring health status and health behaviour" (Jones & Moon, 1993:515) to be further explored, therefore a broader notion of place resulted in exploring historical geographical dimensions of Fife and its industrial legacy obtained through a variety of documentary materials which will

be outlined in the third section of this chapter. Being sensitive to the complexity of place, accumulated through socio-cultural, historical, economic and political processes and how these in turn can exert powerful, but often largely unconscious influences on health and well-being required talking to residents within these areas in Fife. Therefore, the research adopted a qualitative methodology that afforded the opportunity to understand the 'lifeworlds' of people behind the statistics and ask participants about heart attack experiences and recovery, as well as how they experience and interpret place. The final section of this chapter will highlight their perceptions and attitudes towards their neighbourhoods that can help illuminate health variations and distinctions between different people in different places. The evolution of this study using different methodologies moved from understanding place as largely the geography of health variations, to the geography of experience of and in place.

## (De)-Industrialised places and health effects

A number of predominantly quantitative research studies (using both historical and contemporary data) were influential during the early stages of this study and provided evidence that places with an industrial legacy can shape health, often negatively. Historical research conducted by Szreter (1997; 2003) examining health and mortality within Britain during the 19$^{th}$ century, showed that the effects of rapid industrialisation taking place during this time had an incredibly negative effect on population health. He argued that contrary to the belief that economic growth leads to increased prosperity and health for populations, economic transformations and the speed within which urban industrialisation took place led to an increase in health risks. He argued that if political and social responses were not sufficient or appropriate to cope with rapid industrialisation and urbanisation then social disruption often occurred and manifested itself in deprivation, disease and death. The 4 D's (disruption, deprivation, disease and death) inversely affected those who were poorer and those most directly employed within the fast growing industries (Szreter, 2004). Garrett et al., (2006) investigated child and infant mortality within urban populations in England and Wales using data from the 1911 Census. They argued that the type of urban environment within which children and infants lived appeared to be significant regarding early mortality. Instead of viewing

communities using the Registrar General's social classes, they developed 'typologies' of spatial locations related to the dominant occupation and industrial environment. These typologies e.g. 'agricultural environments', 'white collar environments', 'light industry environments' and 'staple industry environments' were combined with child and infant mortality data and, using advanced statistical models, they were able to show that the 'environment' was able to explain more variance in mortality than social class alone. They discovered that children in 'agricultural environments' were most fortunate whilst those in 'staple industry environments' (which included manufacturing or mining) were at severe disadvantage and these environments were most deleterious to child and infant health. The children in these latter areas were more than twice as likely to die as those in agricultural environments. Although the authors were investigating infant mortality, it is highly likely that general population health in these 'staple industry' areas were poorer than, for example, those living in 'agricultural environments.' Surmising about the composition of these 'staple industry' areas, the authors highlighted that these communities were linked to the predominant industry and social, cultural, economic and political factors combined to produce the conditions within these areas which led to poorer health and higher infant mortality. Both Szreter (1997; 2003; 2004) and Garrett et al's (2006) work gives an historical perspective on geographical variations of health and outlines that the consequences of both the economic and social processes occurring within place produced distinct geographical differences in health outcomes. These research studies proved useful during the early stages of this study and the typologies adopted by Garrett et al., (2006) heavily influenced the characterisation of industrial areas in Fife which will be discussed in further detail later in this chapter.

Further studies influencing this research which postulated how places can shape health were conducted by Phillimore and Morris (1991) and Phillimore (1993). In these studies, two areas in the North East of England – Middlesbrough and Sunderland were compared to understand why these two similarly deprived towns showed wide disparities in mortality. Using data from the 1971 and 1981 Census (which Phillimore, nevertheless considered to be a limited data source for representing 'the social') both towns showed high levels of premature mortality and material deprivation. However, the disparity between the two towns regarding premature mortality during the years 1975 – 1986

suggested that mortality for men and women for all causes exceeded the England and Wales average by 58% in Middlesbrough compared to 33% in Sunderland. Phillimore suggested that contributing to these disparities was the fact that both areas had been exposed to considerable economic hardship and insecurity. He argued that the social processes involved in producing these differences may be linked to the industrial environments of these two towns. The industries synonymous with both of these areas included heavy industry such as iron, steel and petro-chemicals (Sunderland) and coalmining and shipbuilding (Middlesbrough). The study years (1975-1986) saw a massive decline in employment across these four industries. He concluded that different contexts within both places and the *distinctiveness* between the areas had influenced population health. He argued that the differences between the environments created by different industries were linked to local health outcomes and, to date, still prevails in de-industrialised places. Phillimore (1993) also argued that in order to understand disparities in health "between populations or places, there must be a strong presumption of significant underlying differences in the circumstances and conditions of people's lives" As previously stated in Chapter 1, Phillimore underscored that by understanding the "local peculiarity" and character of different places, in addition to the characteristics of people in such places that this would be a better way of capturing the "diverse set of possible influences on health" (Phillimore in Platt et al., eds. 1993: 175).

Mitchell et al., (2000) utilised quantitative methods and data from the Health and Lifestyle Survey (1984/85) to address whether an area's industrial legacy differently affected those who shared residence in the same area. The authors hypothesised that both the social and spatial consequences of de-industrialisation would result in changes for the entire population of a de-industrialised area. These would affect everyday life and ultimately health, whether or not the population was directly involved in the industry in question, the hypothesis being that ill health would tend to increase for the whole population of an area. Their results, using multi-level analyses, combined both compositional data exploring if individuals' attitudes to the community varied depending on their socio-demographic and economic characteristics and how these variables affected relationships to health, as well as contextual data about whether living in a de-industrialised area had a detrimental effect on health over and above their individual

characteristics. The results suggested that after accounting for different individual circumstances, living in an area which experienced high levels of industrial decline which had historically greater dependency on employment in those industries, was less healthy. However, the authors highlighted that those who had a positive attitude to their community were healthier than those who did not. This may be, in part, due to different (and health protective) aspects of social interactions within these areas which may guard against ill health. The authors concluded that health "is a function of characteristics of both individual *and* area of residence as well as the individual's sense of belonging to their place" (Mitchell et al., 2000: 78).

Within Scotland, the role of de-industrialisation and its effects on health have been researched by Walsh et al., (2010). The authors, using quantitative data and analyses, sought to gain a better understanding of Scotland's poor health record by comparing mortality trends in the West of Scotland, an area which was synonymous with heavy industry, to similarly de-industrialised regions in a number of European countries (Belgium, France, Germany, Poland, Czech Republic and the Netherlands). This research highlighted that all geographical areas which had experienced de-industrialisation suffered poor health linked to increases in material deprivation, social disruption and unhealthy lifestyle behaviours. Scotland, (and the West of Scotland) albeit relatively more wealthy (in terms of GDP) than some of the other comparable European regions, showed higher rates of mortality for a number of diseases, including coronary heart disease. The authors outlined speculative explanations suggesting that the rate and extent of de-industrialisation which occurred in the West of Scotland (and similarly within industrial areas in other parts of Scotland, although the authors provided little in the way of detail or explanation about other Scottish areas), was experienced more severely compared to some of the other European regions. The higher levels of negative health behaviours, such as heavy alcohol consumption, female rates of smoking and obesity, and levels of material inequality, were greater than some of the other European regions. Nevertheless, deprivation was not necessarily sufficient to explain these health differences between Scotland and the other European regions in question. The authors proposed that as yet unexplained place based factors, as well as other dynamic processes, influenced health in particular ways in Scotland's de-industrialised areas (Walsh, et al., 2010). In their more

recent suite of papers, the authors suggested further socio-cultural elements to account for the complex health picture which occurs within the West of Scotland. Examples given were drivers of 'societal breakdown' defined as an excess of drug and alcohol abuse and suicide, as well as crime and deviant behaviour. Place based differences (between Scotland and other de-industrialised regions), genetic factors, migration effects, and the role of family breakdown were cited as possible contributors to this 'Scottish effect' or more specifically the 'Glasgow effect' (Scottish Government, 2010; Walsh et al., 2010; McCartney et al., 2011). Other authors have suggested that poorer health, particularly in the West of Scotland, may also be linked to its history of religious sectarianism (Graham et al., 2012).

These Scottish studies focus on poor health in the West of Scotland, in part because the population is greater and health outcomes are often poor. However, this focus tends to obscure the fact that poor health is evident in pockets of concentration in other parts of Scotland, such as Fife, which has also been affected by processes of industrialisation and de-industrialisation. What these studies point to are that (a) there are clear geographies of health and (b) that place clearly matters when it comes to health. In particular, former industrial areas appear to continue to fare the worst for poor health and mortality (Walsh et al., 2010; Riva et al., 2011). As such, this thesis sought to understand whether former industrial areas in Fife showed worse health outcomes for coronary heart disease using quantitative methods. The next section of the chapter will outline how place was initially conceptualised during the quantitative phase of the research.

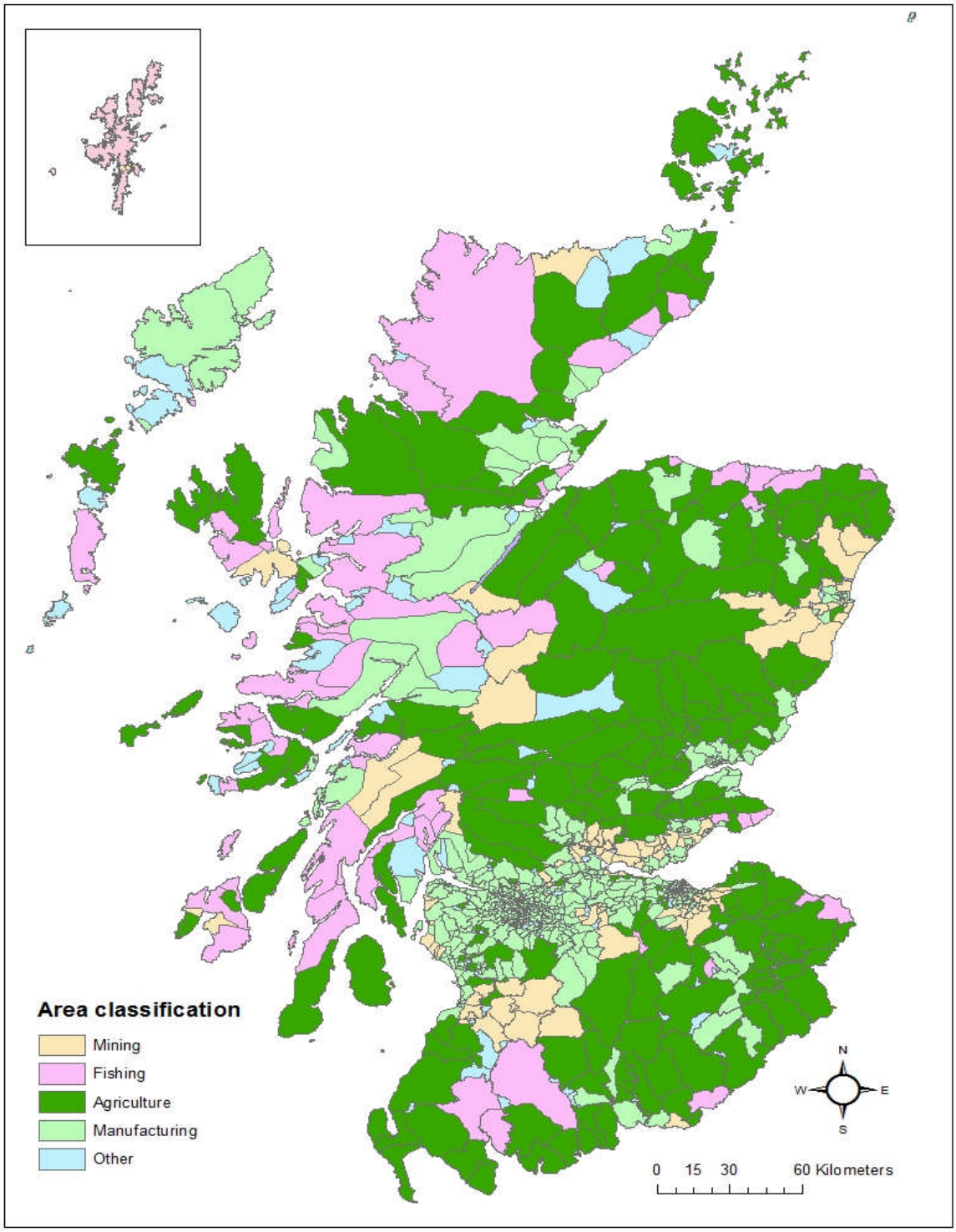
## Accounting for place in Fife: industrial classifications and mapping

This stage hypothesised that Fife's contrasting social environments influenced by the industrial legacy of place (considered in relation to research conducted in other de-industrialised places) could be worse for health. Influenced by Garrett et al's., (2006) work, areas in Fife were classified using the main employment type within an area and, once mapped, it would be possible to show if there was an uneven distribution of coronary heart disease mortality outcomes. Adapting a methodological approach used by Beatty and Fothergill (1996), it was possible to show that outcomes for CHD did differ depending on these 'industrial' areas. The approach used for classifying and visually representing these areas is described in the next section.

Beatty and Fothergill (1996) used a particular technique to investigate the extent of labour market adjustments in areas of chronic industrial decline and the consequences these had for employment observed within the UK coal industry. By using 1981 Census and data of labour market accounts, they established the extent of 'hidden' male unemployment and rates of 'real' unemployment. Although their paper was primarily concerned with outlining labour market aspects of the chronic decline of the coalfields, their research design for defining coalfields and those employed in them was identified as an appropriate approach for distinguishing different industries (especially heavy industries such as mining and manufacturing). Given that these industries in Fife were significant, it was inferred that using Beatty and Fothergill's strategy would be useful for helping define areas of industry. Beatty and Fothergill defined two categories of coalfield areas. These were continuous groups of wards – small electoral and statistical units with around 2,000 – 10,000 people in which at least 10% of the resident males in 1981 were employed in the energy and water sector (which in these areas includes coalmining). They interpreted their statistical threshold flexibly to include some wards which did not meet the 10% criteria but which were surrounded by other coalfield wards. In the second category, they termed the areas as "pit villages". These were places that formed part of the coalfields and comprised wards or postcode sectors where at least 25% of the resident males in employment in 1981 were employed in the energy and water sector. It

was suggested that these pits villages were at the heart of the larger coalfields and had a strong self-identity as mining communities. In describing the UK coalfields, the authors outlined that at the start of the 1980s the coalfields included a population of nearly 5 million people. The sector, which included mining, accounted for 28% of all jobs and in the pit villages, 47%. Both the coalfields and pit villages entered the 1980s with a high dependence on coalmining as a source of male employment. It has been shown above that the mining industry was a historically significant industry in Fife as well as other industries such as agricultural, fishing, and manufacturing. Therefore, by using the same strategy as Beatty and Fothergill, that is by using the same 10% strategy and the same Census year 1981, all areas in Scotland (including Fife) were able to be characterised by their main industry and the distribution of male employment. Using this approach allowed communities similar in industrial background to be distinguished and, in addition, exploration of whether the underlying theoretical considerations of place based effects on health linked to de-industrialisation could be observed within Scotland as a whole (see Map 1 below). The following maps presented were produced by Zhiqiang Feng using data from the 1981 Census.

**Map 1: Industrial classification areas across Scotland**



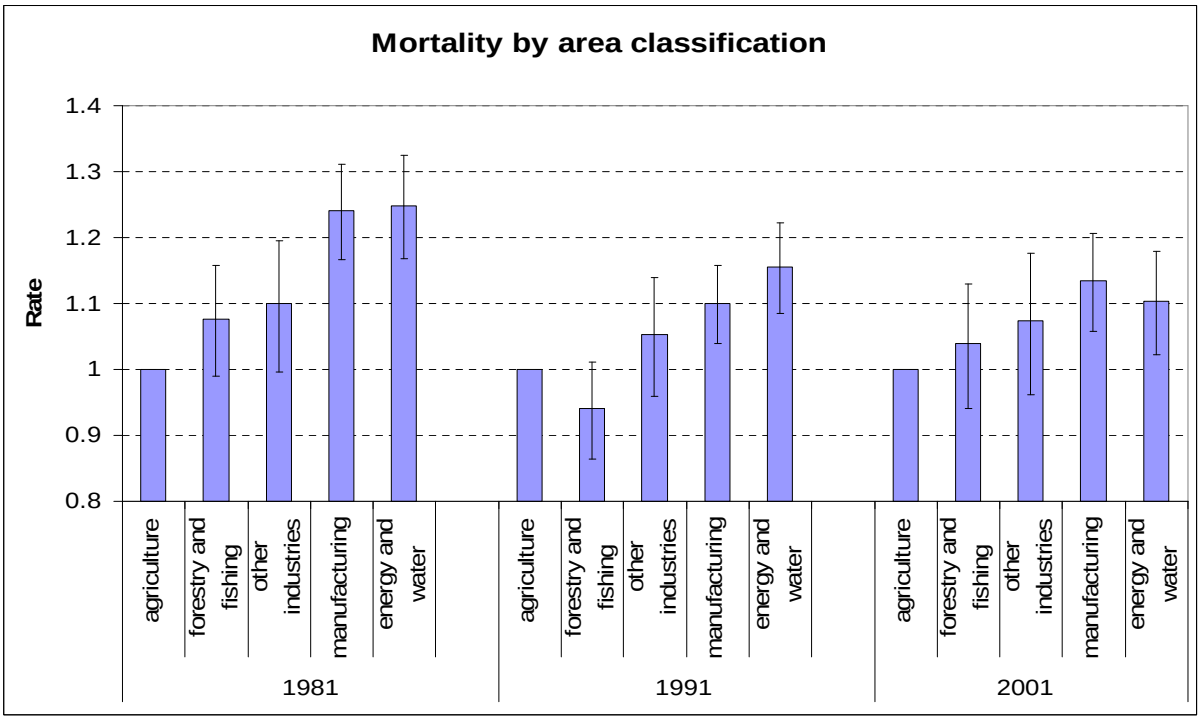

This work is based on data provided with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown and Gimms Ltd. Contains NRS data © Crown copyright. Map produced by Zhiqiang Feng using 1981 Census data.[6]

[6] Dr Zhiqiang Feng, Department of Geography and Sustainable Development, University of St Andrews, UK.

In addition to classifying industrial areas in Scotland, this data was then combined with coronary heart disease mortality data for Fife which was obtained from the Information and Statistics Division (ISD) via NHS Fife, for all patients, both male and female, across the Census years, 1981, 1991, 2001. This information was also combined with the Scottish Index of Multiple Deprivation data for all postcode areas in Fife (Scottish Executive, 2006). Multi-level models were used as they can model complex data. Within health geography, these techniques can help to establish whether variations in health (in this case coronary heart disease) arise because of the composition of an area (e.g. different sorts of people living in different types of areas) or whether contextual effects are more likely (e.g. because places differ in terms of different attributes). Multi- level models allow both sets of data (on individuals and places) to be brought together (Gatrell & Elliot, 2009; Gatrell, et al., 2004; Macintyre, et al., 2002; Pickett & Pearl, 2001; Macintyre, 1994). In addition, by controlling for deprivation in the multi-level model used in this study, the effects of the characteristics of place on health for different 'industrial areas' can be shown.

As can be seen from the results shown in figure 3 below, despite controlling for deprivation, the rate of CHD mortality is worse in areas (particularly evident in 1981) which were predominantly mining (energy and water) or manufacturing. Although rates of CHD mortality diminished across all areas during the following Census years (1991 and 2001), these rates were slower to improve in manufacturing areas in 2001 and mining areas are still worse for health in 2001 compared to agricultural areas. This figure suggests that for both males and females it was not just deprivation which was accounting for these health variations but other contextual, place based factors which raise the risk of mortality from CHD. Therefore, there is something about de-industrialised areas, particularly mining and manufacturing type areas, which is deleterious to health.

**Figure 3 CHD mortality by industrial area in Fife**

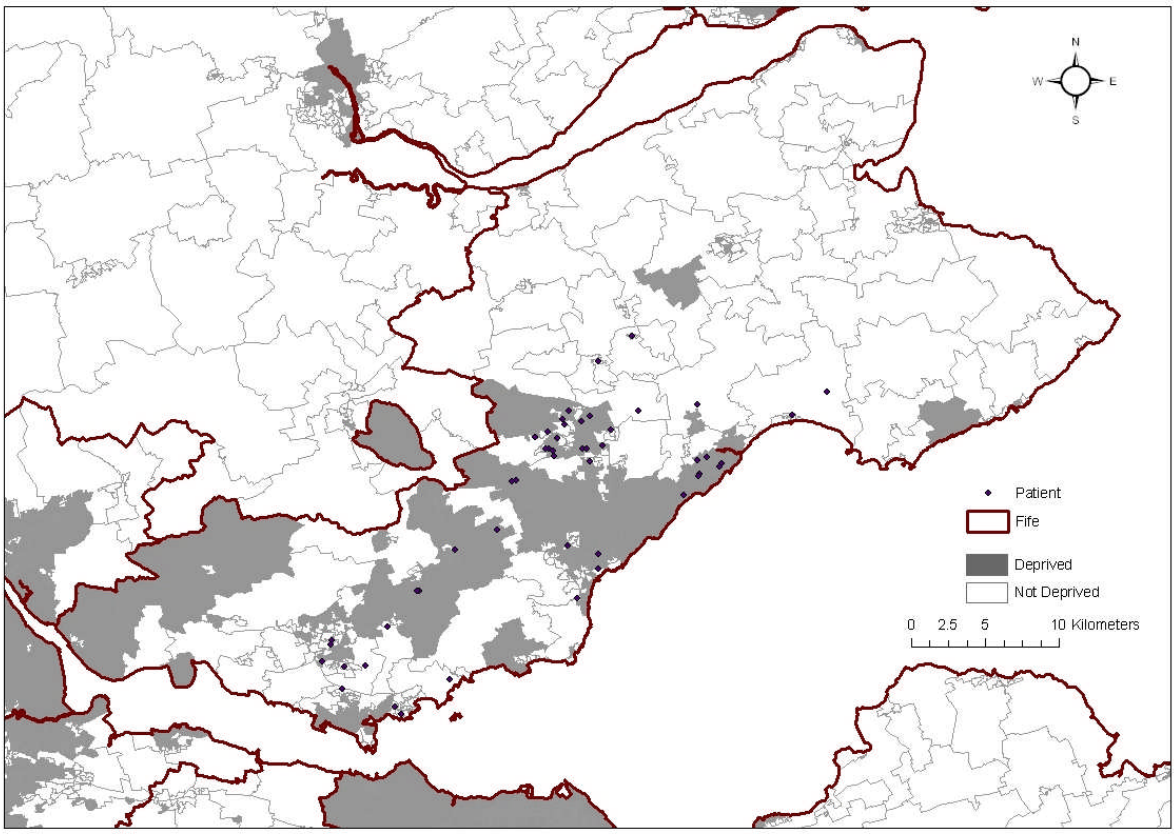



Similarly to the work carried out by Walsh et al., (2010) it can be assumed that other dynamic place based processes combined with cultural, social and environmental factors can negatively influence health in de-industrialised areas. There was a strong possibility that other co-occurring factors associated with the characteristics of these particular areas may play a subtle, but significant role. This result suggested that places (or at least places characterised by their industrial past) may influence health. [7] However, these results cannot explain how and why observed variations for CHD were produced nor can they provide the insights to better understand this phenomenon. These quantitative results, based on aggregated area information and individual CHD mortality data,

[7] It is necessary to highlight that this quantitative stage of the PhD was a collaborative effort.
Sarah McGarrol conceptualised that the socio-historical and industrial aspects of place in Fife and the industrial characteristics of many places in Fife could be significant to health; searched and segmented the 1981 Census data for industry employment; obtained the CHD mortality data and decided on the appropriate health variables to use from ISD/NHS Fife.
Zhiqiang Feng conducted the multi-level analyses and produced the geographical industry/health combined maps for Scotland and Fife and figure 3.
Dr Chris Dibben and Prof Paul Boyle (previous primary supervisor (2007 – 2010) were the supervisory team during this stage of the research.

suggested that to understand these factors of influence in further detail, a different methodological approach was required. Therefore, the quantitative data can be seen to underpin and confirm the initial hypothesis that (de)-industrial areas may be worse for health, but they cannot explain how and why health variations are produced or understood. Mapping where patient participants from the qualitative part of this study lived onto these areas showed whether or not they lived in an area defined as 'deprived' or 'non-deprived'. These maps (2 & 3) provided a visual representation of people in place, but gave little clue as to how people *experience* health and ill health in and through place.

**Map 2: Participants' locations and deprived/non-deprived areas in Fife**



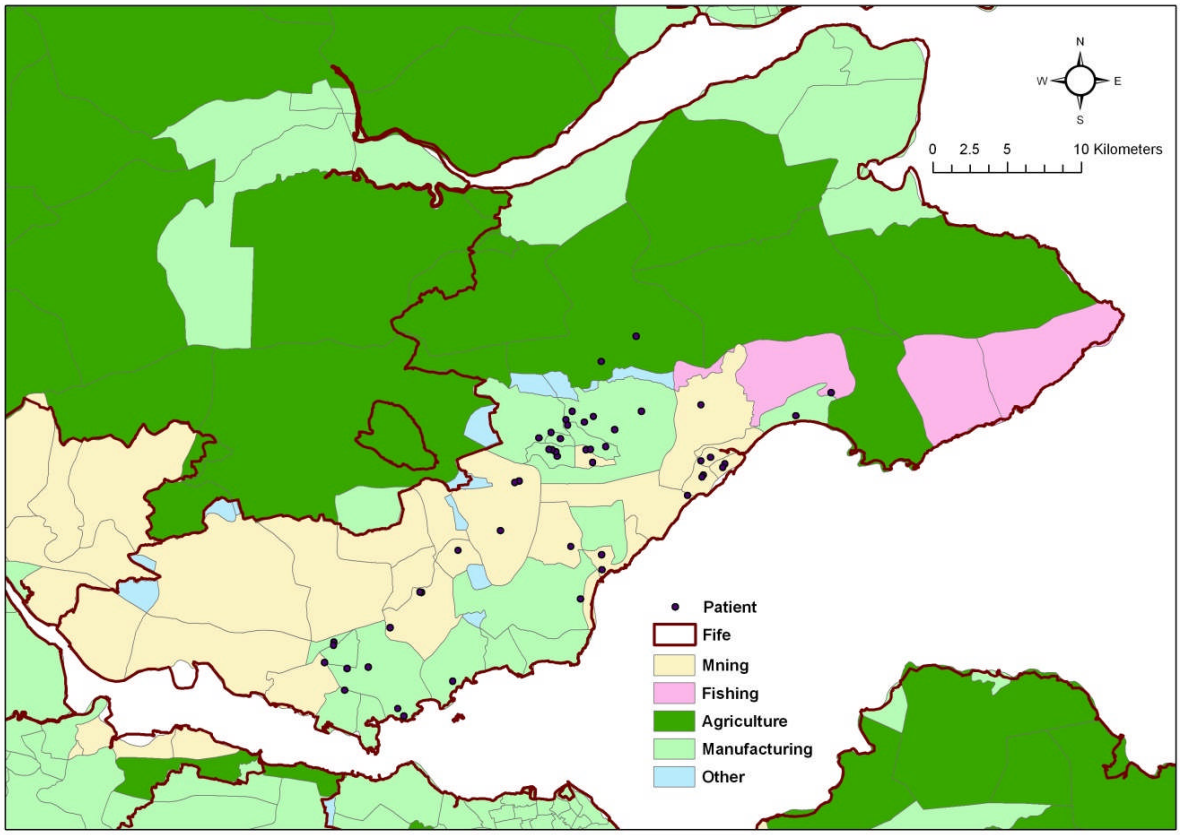

This work is based on data provided with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown and Gimms Ltd. Contains NRS data © Crown copyright.

Map produced by Zhiqiang Feng using participant's locations (using postcodes) combined with SIMD 2008.

Map 3shows the participants' locations in Fife. Participants were located using their postcodes (obtained with consent via the participant recruitment stage and these were used for sampling the final 50 participants who are indicated by the dots on the map). The

postcodes were converted into grid references and combined with the Scottish Index of Multiple Deprivation (Scottish Executive, 2006). This map provides a visual representation of the types of industrial areas in which participants resided.

**Map 3: Patient participants' 'industrial' locations in Fife**




This work is based on data provided with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown and Gimms Ltd. Contains NRS data © Crown copyright.
Map produced by Zhiqiang Feng using participants' locations combined with industrial classification areas devised using Census 1981 data.

This map shows that many participants in this research lived in areas classified as mining or manufacturing. It has been ascertained that living in areas characterised by and impacted through de-industrialisation processes, most evident in mining and manufacturing areas, can have negative impacts on health outcomes.

Kearns & Moon (2002) have highlighted that the analyses of place effects on health using quantitative methods such as multi-level models have limitations and may reflect more

about the data available rather than provide deeper sociological understandings about place. The limitation of only using quantitative methods to account for place shows correlations between people and place, depending on the data available and categories used (socio-economic status, areal geography, available data etc.). However, less well developed are interpretations of how and why the characteristics of place help or hinder health for those who reside there (Macintyre et al., 1993) and in particular, the geographical and socio-historical characteristics of place are often lacking in biomedical and quantitative health geography understandings of health variations (Kearns, 1993; Jones & Moon, 1993). As a consequence, this study which had initially used quantitative methods evolved to using a different research strategy using qualitative documentary analysis to explore place more fully, particularly the socio-historical characteristics of place. Places are influenced by many factors – economic, political, social, cultural and historical which create neighbourhood characteristics and neighbourhood distinctiveness. Therefore, the socio-cultural and historical focus of place provides the context for health which can structure health and health behaviours. Embedding men's and women's experiences of heart attack and recovery within these industrial 'mining deprived', 'non-mining deprived' and 'non-mining affluent' places, explored through in-depth qualitative interviews, can help situate their experiences and allow a broader understanding of how and why place may influence health. It is valuable to present and contextualise in further detail the geographical setting of this research – Fife.

## Revealing Fife's industrial heritage

Fife is Scotland's third largest local authority area by population. Currently, its resident population is approximately 367,370 (www.gro-scotland.gov.uk: accessed 16.06.12) Almost a third of the population live in Fife's three principal towns. Kirkcaldy is the largest (48,108 in 2006), followed by Dunfermline (45,462 in 2006), which was once Scotland's capital city, and then Glenrothes (38,927). Fife was a local government region which was administratively divided into three districts – Dunfermline, Kirkcaldy and North East Fife. Since local authority reorganisation in 1996, Fife Council is a unitary council but the different regions within Fife retain distinct identities and there are marked differences

between the industrial Central and West of the region and the more rural North and North East.

*Mining*

Fife is also known for its long industrial history with contrasts between the more rural, agricultural and fishing North East and the heavy industrial areas of Central and West Fife where manufacturing and particularly mining, were dominant and significant industries. These industries have left an indelible mark, not only on Fife's landscape, but also within the consciousness of its people. Mining in particular, has a long and enduring history in Fife and coal was likely mined on the Firth of Forth from Roman times. By the end of the 19th century, coal mining was the mainstay of Central and West Fife. During the mid to late 19th century mining in Fife became a major industry coupled with the expansion of rail and sea transport. Both forms of transport required coal for power and shipping ports at both Methil and Burntisland were developed to export coal (Hutton, 1999). Coal mining in Fife peaked in 1913 when 9.5 million tonnes was produced. (University of St Andrews museum;
http://www.st-andrews.ac.uk/~ahmicros/MGS/kingdom/coal.html: accessed 14.06.2013)

Coal mining communities were known to be very close-knit, with collieries often employing whole families. Women and children were expected to work underground until the Children's Employment Commission was set up by the Scottish Parliament in 1842. Parliament was so shocked by the findings of the Commission that women and girls and boys under ten, were banned from underground work. The Commission witnessed crippled and distorted bodies of women and children in particular and outlined that illnesses were sown most significantly in childhood from these practices and that each generation of "this class of population was commonly extinct soon after fifty" (King, 2001: 15). Coal mining was a perilous job and the risk of injury or even death was pronounced. After it was legislated that women and children were no longer to be employed in underground mining work, this type of work became associated with the construction of particular types of masculinities defined through dangerous, dirty, manual jobs. Coal became such an important commodity that at the outbreak of World War I, coal supplies

were jeopardised due to vast numbers of miners enlisting. During the Second World War, mining was declared a "reserved occupation" from which men were disallowed from joining the armed forces. From 1943 until 1948, ten percent of enlisted men were not sent to fight but were sent to work in the coal industry. These groups of men were known as 'Bevin Boys' after Ernest Bevin, the Government Minister for Labour and National Service. When the Second World War was over, the coal industry was nationalised. In a country desperate to rebuild after the abuses inflicted by the war, the National Coal Board sank two huge super pits in Fife at Rothes and Seafield, near Thornton and Kirkcaldy respectively, in order to tap into and exploit Fife's deep coal reserves (Hutton, 1999). After 1947, the largest concentration of mining was in the central south-eastern part of the region around Kelty, Lochgelly, Cowdenbeath and Cardenden and some of the biggest collieries were located between Kirkcaldy and Methil. By 1957, 24,000 miners were employed in the region's coal mines, dwarfing production in the west of Scotland coalfields, formerly perceived as the dominant Scottish mines (Oglethorpe, 2006). This level of production and the economic and social implications of the demise of the industry in Fife are often overlooked in literature about the deleterious consequences of Scottish de-industrialisation, compared with the West of Scotland. In part, situating this research in Fife and outlining the impact de-industrialisation has had for many areas in Fife, goes some way to redress this imbalance.

*Social and cultural characteristics of mining communities*

There was a strong and enduring community spirit within mining communities. Miners had their own brass bands, football teams, gala days and pubs. Pubs were most commonly owned co-operatively. They did not encourage drinking or gambling but were designed instead to bring in a profit for use by the community. The first of these was set up in 1896 at Hill o' Beath (near Cowdenbeath) and money was raised to provide the local area with electricity. The Miners Welfare Fund, created in 1920, provided miners with games rooms, libraries and outdoor activities such as bowling. The Miner's Welfare buildings (which mainly benefitted males) encouraged and sustained a specific form of community characterised by a common working environment and camaraderie necessary for working underground and served as a focal point to maintain a common social

lifestyle above ground (Power, 2008). As coal mining often took place in rural settings social engagement or alternative employment and other external social support networks were conspicuously absent. When pits ceased to be productive many families were forced to uproot and move to new pits in other coalfield areas. (http://www.st-andrews.ac.uk/~ahmicros/MGS/kingdom/coal.html: accessed 14.06.2013). The social position of women in the mining communities was largely publically ignored until the demise of the mining industry (King, 2001). A strong community was important for women, often filling the place of relatives and providing a structure within which larger families could be raised and financial stability maintained. However, few opportunities other than marriage, manual factory work or sorting coal as a 'pithead lassie' were available to women. Pressure to conform to the dominant patriarchal, traditional views of the community rendered educational and personal opportunities difficult. Men, by contrast, were often able to access opportunities, such as formal education through the unions or the Miners' Welfare associations. These differences may have resulted in cultural solidarity within the mining community but acted as a barrier to integration with those outwith such communities (Power, 2008). Mining communities were unique as specific structures of economic and social relations evolved, as well as spatial divisions of labour. These gendered social relations were produced locally and were often underpinned by separate and distinct male and female roles. Men were almost always the main breadwinners in mining communities and therefore gender relations between men and women within mining areas took on a particular character. Conceptualisations about the dominant role for men (and all that it entailed) afforded men status and dominance and engendered particular masculinities because of working down the mine (Massey, 1983). Women, on the other hand, shouldered the domestic labour due, in part, to the shift patterns miners worked which made it difficult to seek other forms of paid employment outside the home and community (Massey, 1994).

*Industrial decline and the Miner's Strike (1984-5)*

The 1984-5 Miner's Strike unequivocally altered social relations within mining communities when women, in particular, became the prominent force in raising funds for their communities and publically illustrating the miners' case. Massey (1994) argued that

the traditional pattern of relations between the sexes was being transformed and 'new battle-lines' were drawn. During this time, women's social sphere was widening from their homes and villages to the attention of the wider world. The privatisation of the mining industry post strike, and the closure of the majority of pits throughout Britain, were economic and political decisions taken by central government which had profound consequences for coalmining communities. Communities, although intensely local, were also linked through the industry which defined them. The decimation of the industry and the rapidity with which it declined, resulted in lost social structures, such as unions and social and cultural activities which had been previously taken for granted. Relatively well-paid, strongly unionised, often skilled male jobs were supplanted with poorly paid, unskilled and often part-time, insecure jobs, most often taken by women (Bennett et al., 2000). In addition to the processes of de-industrialisation that occurred in these areas, the re-structuring had other consequences, with many of the traditional gender relations evident within mining areas being disrupted (Massey, 1994). Economic changes were manifested in local economies disappearing and physical reminders of the industry were often demolished and resulted in dereliction (Power, 2008). Consequences of de-industrialisation continue to mar these former mining areas due to a combination of factors but lack of employment opportunities, deprivation and poor health are evident (IDeA, 2010: Riva et al., 2011).

The effect that de-industrialisation had on the mining industry resulted in most of the pits across the UK as a whole and in Scotland in particular closing within five years of the 1984/5 strike. In Fife, underground, or deep-mining, finally disappeared with the closure of Longannet in 2002 (Oglethorpe, 2006). Mining continues in Fife with one opencast mine currently operating near Kelty. Nevertheless, physical reminders of Fife's mining past, such as the original Miner's Welfare Club buildings, still stand today, although the majority across Fife are now uninhabited and disused. The physical evidence of coalmining continues to disappear from the landscape but the few spoil heaps, winding towers and other surface structures which remain provide a strong physical reminder of the once vast mining industry in many mining villages and towns (Oglethorpe, 2006).

The influence of coal mining in Fife remains evident in other ways too, especially in the names of villages linked to the dominant industry such as “Coaltown of Burnturk”, ”Coaltown of Wemyss” and “East Coaltown” for example. The demise of mining is still apparent in the narratives of those who worked in the industry, lived in these communities and who were closely associated with it. Their unique knowledge of not only the working conditions of life ‘doon the pit’ but also the way of life within the mining communities is also diminishing with time. The physical reminders of mining may largely go unnoticed nowadays, but the contribution mining made to the economic, political and cultural context of Fife, and other areas of the UK, deserves acknowledgement. De-industrialisation, then, has re-modelled the social structure of places. The mining strikes of the 1970s and 1980s still figure prominently as significant events in history, not only from an economic, political and cultural perspective, but also because the social structures within these communities (particularly class and gendered relations) were altered unequivocally (Massey, 1984). It is important to recognise that particular places are influenced by wider social structures and processes and are part of broader geographical divisions of labour. Fife’s industries attest to this and the character and legacy of places associated with other forms of production, such as manufacturing, shipbuilding and fishing will be outlined next with the onus being to establish that particular places developed their own character (and social relations) through their particular socio-cultural, political and economic production.

*Manufacturing*

Manufacturing was a significant industry in Fife, particularly the production of linen and flax during the late 18th and during the 19th centuries. By 1850, Fife was home to thirty four of Scotland’s 188 linen mills. Dunfermline became world-famous and the biggest factory in Dunfermline at its peak employed around 1500 people, of whom 90% were women (http://www.electricscotland.com/history/industrial/industry10.htm: accessed 13.06.13). The different gendered geographies across different industrial sectors were apparent especially when certain manufacturing work was considered. Mining was socially constructed as “man’s work” whereas the observation that “detailed, fiddly jobs are traditionally done by women [as] they have a special aptitude for that kind of work”

(Marks, 1980 in Massey, 1984: 140-141) resulted in women being presumed to suit manufacturing type work. Female labour was cheap and the importance (or not) placed on certain types of work and who did it was an example of the reproduction of social structures in society as a whole, but which were evidenced in the work available for females in local areas (Massey, 1984). Linen production in Fife reached its peak during the late 19th and early 20th centuries. Factories were booming, particularly during World War I (1914-1918) when textiles were sought after due to the requirements of war. Over 11,000 workers were employed in the factories and other associated trades. Post-war, Fife's textile industry suffered a marked decline. This was, in part, due to a combination of factors including competition from other countries producing textiles more cheaply, the development of man-made fabrics and the associated changing social tastes in fashion and family life. The last linen factory in Dunfermline closed its doors in 1989. http://www.electricscotland.com/history/industrial/industry10.htm: accessed 13.06.13).

However, Fife's manufacturing success story was linoleum. Kirkcaldy and linoleum are synonymous with each other and the first manufacturer in Fife was Michael Nairn & Co. of Kirkcaldy who had established a prosperous floorcovering industry from 1847. This reached epic proportions when they became the world's largest linoleum manufacturer in 1877. In other parts of Fife, namely in Newburgh and Falkland, several other important firms were also producing linoleum. During the 1880s linoleum production was booming and the industry became Kirkcaldy's biggest employer, with around 3000 people working in the factories and the associated industries, such as engineering and design. The extent of this production created a "queer-like smell" and town visitors would comment on this. From a socio-cultural perspective, the industry was significant outside working life and many Fife towns benefitted from the generosity of factory owners, who invested in leisure and recreation facilities for residents, including parks, bowling greens and museums. Workers were provided with healthcare and social opportunities, including joining brass bands. Although many of the jobs were held by women, it is likely that the social activities favoured male employees. The industry remained buoyant during World War II (1939-45) with the factories contributing to war work, particularly in manufacturing materials for camouflage, aircraft fittings and torpedoes. Once war was over linoleum production again reached a peak but decline came in the second half of the

20th century as alternative floor coverings displaced linoleum. Many of the factories ceased production, were changed for other uses or demolished. The landscapes of Kirkcaldy, Newburgh and Falkland markedly changed although the industry has not disappeared entirely from Fife. The Swiss-owned Forbo-Nairn factory in Kirkcaldy is now the only place in Britain to manufacture linoleum, under a trademarked name 'Marmoleum' (University of St Andrews Museum; (http://www.standrews.ac.uk/~ahmicros/MGS/kingdom/lino.html: accessed 13.06.13).

*Shipbuilding*

Shipbuilding also has a long tradition in Fife. Wooden shipbuilding was common along the coast in the late 18th and early 19th centuries with yards at Burntisland, Dysart, Kirkcaldy, Methil and West Wemyss. With the introduction of iron and then steel, these materials revolutionised the industry, reduced the dependence on timber ships and provided faster ships with increased cargo capabilities. By the 1880s with the increase of steel being used for shipbuilding, Kinghorn shipyard employed as many as 1,000 men with many of the workers travelling from Kirkcaldy and Burntisland due to a shortage of available housing locally. However, by 1909 the Kinghorn shipyard was closed except for one ship built after the First World War and Burntisland had overtaken Kinghorn as a more suitable site for large-scale shipbuilding. Better technology and standardisation of parts allowed for greater ease of production and Burntisland shipyard managed to weather the economic depression, much like the coal industry, during the 1930s. During the Second World War, frigates, landing craft and aircraft carriers were made. By the 1950s a host of trades were employed at the shipyard; welders, joiners, electricians, engineers and draughtsmen. At its peak, in 1958, 1,400 workers were employed but due to foreign competition during the 1960s, the 301st and last ship was launched from Burntisland in 1969, signalling the ending of the shipbuilding tradition in the district (Kirkcaldy District Council Museums, 1994). In more recent times, Fife maintains its link with ships but to a far lesser extent than before. Rosyth, a large naval dockyard located on the Firth of Forth, west of Burntisland, undertakes servicing and re-fitting of vessels. A recent contract has been secured to assemble a new aircraft carrier (http://www.clydewaterfront.com/news/latest-news/2013: accessed 1.07.13).

*Fishing and agriculture*

The fortunes of Fife's fishing industry have risen and fallen over the years but it has played an essential part in forming Fife's coastal landscape and was one of the economic cornerstones of the region during the 19th century. The people who lived in many of Fife's fishing communities were close knit as fishing was a demanding and all-consuming way of life. When it was not possible to fish year-round, it was common to find fisher-farmers and fisher-miners. The fertile land around the East and North of Fife was a prime site for the agricultural industry. In Buckhaven, during the late 19th century, the other great employer was mining where the Wellesley pit was sunk. Some men known as half dealsmen worked in the pit for half the year, leaving with their families in the summer to follow the herring shoals usually around the north of Scotland and later off South Shields and Great Yarmouth.

Women were responsible for 'sheiling' (shelling mussels for bait) and baiting the hooks for line fishing and often maintained the nets. Gutting and packing the fish once landed was women's work (Kirkcaldy District Council, 1994). Herring fishing remained prevalent until the 1930s and there were fishermen in most of Fife's coastal villages. The East Neuk villages became synonymous with herring, while salmon fisheries flourished in Newburgh and along the River Tay. Crail was a major fishing hub in the medieval period, but as the expanding industry made larger boats and curing yards necessary, Crail was overtaken by places such as Buckhaven, St Monans and Anstruther. Pittenweem's fishing industry was established later in the 19th century. The challenges and dangers that epitomised the fishing way of life created a feeling of solidarity with entire communities participating in the fishing industry and most boats were family owned. Perhaps due to the dangers and hardships of life, fishermen were both very religious and strongly superstitious, (University of St Andrews museum; http://www.st-andrews.ac.uk/~ahmicros/MGS/kingdom/fishing.html: accessed 24.06.13).

Pigs and rabbits were bad luck, as were church ministers. "If a minister walked o'er the tap o' the net they would just bundle it up and put it in the garret[8] ...it didnae matter if it was a brand new net...even if a minister's shaddie[9] went on it..."(Kirkcaldy District Council Museums, 1994). As technology advanced, the cost of boats and equipment led to many families being unable to afford to continue. New, larger fishing boats could not fit into Fife's smaller harbours, such as St Andrews. Combined with demand for different kinds of fish and the movement of the shoals, decline of the fishing industry in Fife was inevitable. After World War I, many returning men did not resume fishing. World War II further hastened the demise of Fife's fishing industry. Today, Pittenweem is the only Fife village which maintains a fleet and a regular fish market. In places such as St Andrews and Crail, creel fishing for crab and lobster is all that remains of a once thriving industry and distinctive way of life (University of St Andrews museum; http://www.st-andrews.ac.uk/~ahmicros/MGS/kingdom/fishing.html: accessed 24.06.13). Many former fishing villages are now popular holiday destinations and many of the properties are owned as second or holiday homes.

*The "new town" - Glenrothes*

In addition to the long-standing communities linked to Fife's former industries, contemporary social and economic changes resulted in the creation of a number of new towns being built across Scotland, which included Glenrothes in Fife. Glenrothes was designated in 1948 under the New Towns (Scotland) Act 1946 as Scotland's second post-war new town. The name Rothes comes from the association with the north-east Scotland Earl of Rothes, family name Leslie. There is a small village named Leslie very close to Glenrothes. The Leslie family owned much of the land historically. Glen (Scottish for valley) was added to prevent confusion with Rothes in Moray, and because the town lies on the Leven valley (http://www.fifedirect.org.uk/yourtown/index.cfm: accessed 15.09.2011). The original town plan was to build a new settlement for a population of 32,000-35,000 people. The main reason for the designation of Glenrothes was to house miners who were to work at a new pit being sunk just outside the village of Thornton,

[8] "garret" = attic
[9] "shaddie" = shadow

south of Glenrothes. The Super Pit was named the Rothes Colliery and it was officially opened by the Queen in 1957. About 5,000 miners were required to produce 5,000 tonnes of coal per day, and huge railway yards were established. Many mining families moved to Glenrothes from the declining coalfields in the West of Scotland and Lothian areas to work at the new pit. The pit was to have a working life of 100 years. The planned long-term benefits were to be huge and the driver for economic regeneration for central Fife. At its peak the Rothes Colliery employed over 1,500 miners. However, in 1961, four years after opening, the huge investment was written off and the mine closed as a result of flooding and geological problems. Ironically, miners who had worked in older, deep pits in the area, had warned against the development of the Rothes Pit for these very reasons. The pit's closure was a devastating blow for the area and further development of Glenrothes was almost stopped. (http://www.glenrothes-fife.co.uk/history/: accessed 27.06.13) As a response to this changing fortune, central government changed the town's role and appointed Glenrothes as one of the economic focal points for Central Scotland. The town became the administrative centre of Fife Regional Council and Fife Police Headquarters in the 1970s. The town was successful in attracting a plethora of modern electronics factories and established itself as a major industrial centre and part of Scotland's "Silicon Glen" in the 1980s and 1990s. However, the electronics industry significantly declined in Glenrothes during the 1990s and 2000s. (Alandon, http://www.fifeserve.com/glenrothes--the--new-town.html: accessed 27.06.13).

The industries across Fife have played a significant part in shaping economic, social and cultural life. Places share similarities with other places but they differ due to their own specific history and character (Massey, 1984). The importance of these industries cannot be underestimated for understanding geographical, social, cultural, economic and political differences between areas in Fife. In this thesis, it is argued that understanding the links between place (context, social structures and social relations, for example) is important. By understanding the socio-historical legacies of different areas in Fife, further contextualisation of why place matters can be illustrated. Additionally, understanding how places can both shape and be shaped by people and interact with other key determinants such as gender, age and socio-economic status, can provide further clues for exploring contemporary inequalities of CHD, which appears to be worse in places

blighted by de-industrialisation (Phillimore and Morris; 1991: Phillimore 1993; Phillimore et al., 1994; Mitchell et al., 2000; Walsh et al., 2010; IDeA, 2010: Riva et al., 2011).

## Connecting people and places in Fife

How places are perceived and experienced by participants in this research is important particularly for engaging with and recognising that dynamic processes impact health. For example, local cultures and identities influenced by the geographical location of industries and gendered divisions of labour combine over time to create particular social and spatial structures and characteristics unique to local areas (Massey, 1994) and these will, in turn, be differentially experienced by residents within areas. Assembling the rich, complex nature of place and why places shape health can be explored through in-depth interviews with participants providing insights into their feelings, experiences, attitudes and beliefs. Evidence that place based factors in combination with other determinants can influence feelings, experiences, attitudes and beliefs will be presented. Illuminating participants' nuanced experiences of place and their experiences of heart attack and recovery is the focus of the forthcoming analyses. Recovery from heart attack is particularly interesting and use of cardiac rehabilitation services by those who are located in different social settings in Fife shows variation despite there being a national health service tasked with delivering equitable provision. Qualitative methods can also reveal broader societal complexities and social relations whilst allowing greater attention to be paid to lay experiences of and explanations about heart attack experiences and recovery, rooted in and to particular places. This is an important way to understand in greater detail how health inequalities may manifest within place (Graham, 2001; Kearns & Moon, 2002; Johnston, et al., 2000).

This forthcoming section will explore participant's perceptions and attitudes to their neighbourhood in Fife which can emphasise, not only physical connections to a place, but also identification with the local area. This section is concerned with exploring how people themselves characterise and account for place. Communities and neighbourhoods can be centres of social meaning and serve as places which nurture and where needs, of differing kinds, are met (Tuan, 1977). Places can strengthen the sense of self which can be

fundamentally shaken after suffering a heart attack for example; provide connections with others, provide security and safety and provide opportunities for growth or change (Peacher, 1995). Cattell et al., (2008) highlighted that places can also enable people to achieve privacy and rest, provide relief from stress and opportunities for social interactions that can be beneficial to health and well-being. These ingredients, it can be argued, are all necessary after a serious health threat. Nevertheless, places may not fulfil all these positive elements and some people may have fewer opportunities for peace and quiet, increasing stress and limiting prospects for social interactions which may already be compromised by the limitations a heart attack imposes, particularly in its immediate aftermath. These factors can affect physical, mental and emotional well-being and reduce people's ability to engage in health promotion behaviours. These factors can become heightened when recovery from ill health is at stake.

*Participants' experiences of place*

Demographic characteristics of the fifty participants (Appendix 10) related to length of residence in an area shows that a significant minority have resided in the same area, at the same address, for a substantial period of time. A significant minority (n=20) had lived at their current address for more than twenty years and those from 'mining deprived' and 'non-mining deprived' areas were more likely to have been resident in the same area, and often the same house for a substantial period of time. Indeed, Wildfred, Carol, Jude and Donald have all lived in their respective properties for more than 40 years, far longer than any participant from 'non-mining affluent' areas. The majority of participants were born and bred in Fife and many stated during the interviews that generations before them were "Fifers" also. There was a strong and enduring sense of identity and connection to Fife for many of the participants, not only to their local area but when asked to make comparisons between their neighbourhoods and other ones in Fife, there was an understanding of place based contrasts and nuanced differences between and within places in Fife. A number of the participants provided examples of perceived place based differences, particularly related to differences in the physical, socio-cultural and historical environment between different areas. The historical legacies of many places in Fife are woven into the fabric of Fife and featured prominently in the narrative accounts of many

participants in this research. In particular, areas classified as 'mining' by participants were often perceived as consisting of a distinct 'culture' inextricably linked to place through the people. The recollections of these industries were strong for many of the participants who were directly employed and/or who lived in mining areas. There was a sense from participants of a shared culture; for example, a number of participants from mining areas suggested that a sense of place is connected to one's sense of identity and links relationships to others through commonalities. Narratives about social, political and economic consequences of the demise of these industries were discussed by some participants at length and examples were given of the perceived continuing impact of de-industrialisation in their communities. Place, it can be suggested, plays a key role in identity formation. It is where people feel they belong and are connected to. However, those who 'belong' or not to an area were highlighted by participants and perceived contrasts in behaviours and attitudes from people from different parts of Fife were alluded to. These contrasts were observed in narratives of those not only "fae"[10] Fife, but by those who were "incomers" too. Paul who was born and bred in Fife highlighted this point,

> **Paul:** "there's a lot of mining villages in Fife so I would say there are similarities yes, very much so. I mean Methil, then you go through to the likes of the west and you've got Oakley, you had Lochore, you had Lumphinnans. So I would say very much so. I would say the similarities were based on the work they did and their outlook on life was very similar sort of thing. I used tae play football round aboot Fife and I kent[11] a lot of boys in different places round aboot Fife and you used to find their outlook was much the same in those kind of areas" (male, 62, nma, attender).[12]

[10] "fae" = from. Many of the quotations used throughout the forthcoming chapters have retained the Scots language (and Fife dialect spellings of words) used by participants. For the purposes of clarity for the reader, English language meanings of certain words and phrases will be shown in footnotes.

[11] "kent" = knew

[12] Participant pseudonyms are used for all quotations and their sex, age, area and whether they were an attender or non-attender at cardiac rehabilitation are provided in brackets - (e.g. female, 70, md, non-attender). Area refers to md = mining-deprived; nmd = non-mining deprived and nma = non-mining affluent. For more information about patient participants see appendix 10.

Participants were asked during the interview if they perceived their area to be distinctive from other areas in Fife (Appendix 13 interview schedule). It was common for participants to talk about characteristics of their area compared to other areas. The industrial heritage of certain places, particularly those towns and villages associated with the mining industry, were discussed, such was its ubiquity. The following examples by Wilfred, Paul and Ivan indicated the areas commonly associated with the mining industry.

> **Wilfred:** "at one time the whole of Fife was a mining area. Places such as Kelty, Lochgelly, Lumphinnans. They all had pits. Cardenden, where we are today. These were a' pits. Bowhill. A' pits and everyone knew one another in the mining communities" (male, 69, md, attender).

> **Ralph:** "It was all pits roond aboot here. That was what East Wemyss was for. When ye left the skil[13] ye didnae think aboot onything else. Ye left the skil, ye went doon the pits. That was it. All ma uncles worked doon the pits. Most of the folk I kent roond East Wemyss and MacDuff all worked doon the pits. 'Cos that's all there wiz at one time. It wiz all pits" (male, 56, md, non-attender).

> **Ivan:** Well, I mean, in its way Fife was lots and lots of mining areas, you know. Methil, Buckhaven, Dysart, here [Kinglassie], Cardenden. They were all sort of mining...that was the main sort of industry which has gone now. It's all gone" (male, 68, md, attender).

For those participants from mining areas or those originally 'belonging' to mining areas who, at the time of interview, lived elsewhere in Fife, there was a sense that they were connected in various ways to the industry which defined their 'home' and by extension, had defined part of their personal and social identity. Some participants had generations of family members who were miners, some of whom had re-located to Fife from other areas in Scotland when pits closed. Indeed, five of the participants within this study worked either down the mines or in associated jobs at the pit head.

[13] "skil" = school

It has been suggested earlier in this chapter that in some areas, industry dominated, created and structured economic, class, gender and social relationships over time and thus impacted on ways of behaving through gendered roles, norms and lifestyles (Massey, 1984). The demise of this industry, albeit decades ago, still remains pivotal in Fife's economic, political and social history. It also retains a psychological relevance for those closely linked to this industry through place. However, there was frequent acknowledgement that places characterised as mining were in decline and had been for some time. One participant described former mining places as "run doon toons, going doon the drain."[14] Participants recounted differences in these areas before when "the mines were booming"[15] to now. Fergus, Wifred and Elspeth highlighted these changes,

> **Fergus**: "It [Methil] was a mining village, a mining toon 'cause ye had three pits aroond ye. I've got three photos up there of Old Methil and ye can see how busy it was. But, ye had the docks, ye had all the mines, ye had brickworks. Aye, it was an industrious place at one time and the song, ye ken[16], The Proclaimers song, "Methil no more," [17] I mean it's just died a death!" (male, 61, md, non-attender).

> **Wilfred:** "Well, noo[18] there's hardly any work. I served ma time in the pits. The place was loaded. But now, none" (male, 69, md, attender).

> **Elspeth:** "When the pits was there [in Kelty] it was a community. I mind o' it. I was just a wee lassie running back and forward into yir[19] neighbours hoose and them coming into yours, making a big pot of soup and sharing it when my granddad come hame from his work. And the pits they were going full boom at the time and my granddad was a fireman and my uncle Bob he was one of the workers and my uncle Don. It was a family concern. Every man was sort o' in the pits" (female, 73, nmd, non-attender).

[14] Helen (female, 66, md, non-attender) = "run down towns, going down the drain."
[15] Paul (male, 62, nma, attender)
[16] "Ken"= know
[17] "Methil no more" refers to a line from the Scottish band, the Proclaimer's song, "Letter from America" 1987.
[18] "noo" = now
[19] "yir" = your

Elspeth recalls a strong sense of community and sense of purpose when the pits were booming and contrasts that with her observations of the village now.

> **Elspeth:** "Kelty is a village and after the pits shut doon, I mean, the pits were the dominant part for Kelty. There's just nae work for the young anes[20] noo and I feel sorry for them. I mean, so what do they dae[21]? They merge on corners, go into gangs, whereas if they had, I mean they've no' even got a community centre for the kids" (female, 73, nmd, non-attender).

The majority of participants reflected on what they perceived to be current factors that contemporaneously disadvantage former mining areas and stated that long standing industrial decline had affected employment opportunities, general infrastructure and overall well-being. This was articulated by those from mining communities, as well as those from elsewhere in Fife,

> **Ray:** "unemployment is very high here. I mean 20, 30 year ago there was plenty industry in the toon[22] predominantly coal mines and related work. Now the whole country doesn't have a coal mine left! We're Labour controlled but nothings come in the place of all these jobs that are now defunct. I mean, when I left school there was plenty employment here. The docks, the coal mines, steel works, brick works. Now, all closed" (male, 60, md, attender).

> **Carol:** "I mean there's a lot of unemployment now in Methil since the pits closed and just other things that went on. Once they closed the mines it just made a depression on everybody. It wisnae[23] just here. I was just all over where pits were, ye ken?" (female, 75, md, attender).

> **Adam:** "with the mining industry there was nothing really to have backed it up when it fell doon, so there's high unemployment and you know, people don't have the skills now to get jobs and adequate ways to replace that.

[20] "anes" = ones
[21] "dae" = do
[22] "toon" = town
[23] "wisnae" = wasn't

> What's there? They were the major employers there. I mean people have to live in areas with what they have. It must be very, very hard"
> (male, 44, nma, non-attender).

These participants' accounts of the impact and decline of mining areas concur with some of the evidence presented earlier in this chapter about health inequalities associated with former industrial areas which have been transformed through de-industrialisation (Phillimore, 1993; Phillimore et al., 1994; Mitchell et al., 2000; Coalfields Community Campaign, 2007; Walsh, et al., 2010; 2010; IDeA, 2010; Riva et al., 2011). It has been highlighted that although former mining areas do not have a monopoly on deprivation they still show systematic disadvantage measured using quantitative areal geographies, such as the Scottish Index of Multiple Deprivation. The coal industry continues to cast a long shadow over the communities that once depended on it. It is over thirty years since the majority of pits closed across Fife, a pattern which was reflected across Scotland as a whole, and there has been the adoption of many regeneration initiatives. However, the coalfield areas are still markedly more deprived than the Scottish average (Coalfields Community Campaign, 2007) which in turn has consequences for health and well-being in a variety of ways. With regards to health behaviours, men, women and children from former coalmining areas are often characterised as making 'poor lifestyle choices' with high rates of smoking, levels of alcohol use and poor diet and nutrition coupled with inactivity leading to obesity. Health service provision, it has been argued has not always been good in these areas and people have often been slow to access services, leading to poorer health outcomes (Tod et al., 2001; 2002).

This gloomy picture of former mining areas contemporaneously is a far cry from the buoyant, industrious places that they once were during the height of the coal mining boom (Riva et al., 2011). Some participants reflected on this point throughout the interviews suggesting that these places can be difficult environments within which to recover from a serious health condition. In addition to participants' narratives, research has identified that over successive generations following the demise of industries, income disparities, erosion of community identity and structures, and a breakdown of social ties, have occurred within these declined communities. Persistently high levels of

unemployment and reliance on state benefits have been the norm in many former coalmining areas. Poor economic chances coupled with low aspirations for the future have resulted in many young people bearing the brunt of the legacy effects of the coal mining (Riva et al., 2011). A number of participants mentioned these issues and the effect on the younger generation in these areas. Former mining areas in Fife certainly have particular issues linked to the socio-cultural, economic and political structures which over decades have combined to create the conditions experienced within them to date. It is arguable that a combination of factors has impacted on other de-industrialised areas and certainly former mining areas in Fife are not the only places to have a monopoly on industrial decline and deprivation. This can be illuminated when discussing 'non-mining deprived' areas with participants. One of the main examples of a town defined in this research as 'non-mining deprived' is Glenrothes, one of Scotland's 'new towns'. Within this research, participants from 'non-mining deprived' areas were often resident in Glenrothes. The structure of Glenrothes was often described by participants as an 'overspill town' or 'new town' and aptly described by Jude, who epitomised it in the following way:

> **Jude**: "Glenrothes was built as an overspill town for the likes of Glasgow and that. And then when they sank the Rothes pit doon at Thornton it was supposed tae be, it was going tae be the salvation and a lot of miners from all o'er different parts of Scotland moved to Glenrothes. But what had actually happened with the Rothes pit is the geologists got it aw wrong and it become really expensive to tak' the coal oot. 'Cos the seams in the Rothes pit were that low they couldnae get machinery in to load so they were keeping digging it oot by hand an' that became labour intensive and expensive. So they eventually shut it doon. And then basically that was a disaster. Because you'd all they miners that had moved through to Glenrothes and all they kent, a' their life was doon a pit, digging coal. They didnae ken anything else. And it was difficult for them to move onto other jobs, ken"
> (male, 66, nma, non-attender).

Derek and Jason, both of whom had lived in the 'new town' for many years, highlighted how political decisions made elsewhere (similarly to Jude's perspective of sinking the pit

which was geologically unsuitable even with 'expert' knowledge), could fundamentally affect opportunities,

> **Derek:** "Well, it's all political the industries over here. You had mining. They got rid of it. That was political. You've got electronics. That's fly by night. Every three years they change, they go somewhere else because they get a grant. There's nothing really in Fife apart from farming. You've got Rosyth dockyard which was run down. You had Burntisland ship yard. I mean, if you actually go into the records you'll find that the shipyard used to produce a ship faster than any other place in Britain. A lot of people don't know that. It's just the modern age isn't it? Everything has changed. There's no big industry" (male, 64, nmd, attender).

> **Jason:** "It [Glenrothes] used to be good for engineering but they're all shut and all the factories have been sent doon tae England. Maggie Thatcher for ye! (male, 48, nmd, attender).

Many participants had moved to Glenrothes in their younger days for work-related and housing opportunities and they reflected on how it 'used to be' compared to now. There was the implication that Glenrothes had declined in numerous ways and showed outward signs of the complex web of factors which can impact on health and well-being. Some participants from Glenrothes were rather negative towards their area. In fact Donald[24] concluded that "the best thing they could do is to put a bulldozer in it and just shove".

Fife's "new town" was described routinely by participants both resident and non-resident, as having experienced decline, not perhaps as catastrophically as former mining areas, but nonetheless participants articulated that it had been tainted by industrial decline. It was acknowledged that the character and composition of Glenrothes was different to mining villages and towns but that it too has suffered and continues to experience a number of social consequences. One of the contributory factors for this decline was related to the fact that Glenrothes was purpose built and a place for 'incomers.' Isaac and Will suggested that,

[24] Donald (male, 74, nmd, non-attender).

**Isaac:** "I'm no' from Glenrothes but I ken it was built mainly, it was a mining place to start off wi' and then it was built, the seven new towns that was built in Scotland, it was built to take the overflow from the cities, Glasgow and Edinburgh and Aberdeen and that. So that was more or less the purpose of Glenrothes, I think. Just an overspill town" (male, 56, nmd, non-attender).

**Will:** "there's a bigger percentage of people from Glasgow in this area, you know all the overspills from Glasgow and everything is here. What I mean is it's a League of Nations in Glenrothes" (male, 76, nmd, attender).

There was an impression conveyed by participants from Glenrothes that their feelings of belonging to Glenrothes were not the same compared to those from, for example, traditional mining areas, although there were exceptions. For some participants' in Glenrothes, they outlined feelings of fondness and belonging and a few of the participants from this area articulated that they loved their neighbourhood, mostly due to qualities including neighbourliness and peace and quiet. These characteristics of place could increase participants' ability to better cope with their heart condition and aid recovery. Joe, Neil and Elspeth articulated that,

**Joe:** "I've good neighbours. Aye, there's always somebody saying come across for your dinner or something. And I'm always in somebody else's hoose. Aye, so it's really a good area" (male, 74, nmd, non-attender).

**Neil:** "I love it yes. I love it. It's got all the things I need. It's got shopping, it's got trees, it's got lots of grass and whatever around and I talk to the blackbirds outside the front door sometimes. Not very good on conversation blackbirds, but I get on all right with them" (male, 69, nmd, non-attender).

**Elspeth:** "I love it. Aye, I love Glenrothes aye. This place I've got great neighbours eh. Naebody bothers ye. I've never had any noise or anything. I mean we're all friendly and I love it. You get the sun all morning til 12 o'clock and then from 12 o'clock it's in my back garden. There's no' much that ye couldnae love here, aye" (female, 73, nmd, non-attender).

Other participants questioned their sense of identity, belonging and connection to Glenrothes. For some, this was particularly stark and suggested that prior experiences in their area had resulted in un-edifying social relations and as a consequence, these had served to isolate and distance those participants from each other and their wider community,

> **Reg:** "Here nobody seems to acknowledge you and it's no' just one or two, it's everybody. We've been here for 9 years and we've no' been in anybody's hoose. What you find is that people who have come in. You look at them and say 'what's the history, why are they like that?' Have they something to hide cause they don't seem to want to know anybody. Unfriendly. And they just don't want to talk to you so, maybe not my kind of people"
> (male, 74, nmd, non-attender).

> **Will:** "Because it's too, well, there's no' community in Glenrothes. You're all individuals" (male, 76, nmd, attender).

Bill and Angela discussed social relations of neighbourliness and community in Glenrothes. They also compared it relative to mining areas, where they perceived that belonging and social connectedness was taken for granted and demonstrated more frequently,

> **Bill:** "living in a mining village [Kinglassie] and working doon the mine and then coming to a new town where the factories are the main employment are two completely, totally different things. But then I think also that the time I moved to Glenrothes, most folk had bought their houses, built six foot fences in their back gardens and ye didnae get tae ken yir neighbour"
> (male, 49, nmd, non-attender).

> **Angela:** "I think [Glenrothes] doesn't really have a sense of community. The likes of Kinglassie, it's there because people have lived there for generations, whereas people in Glenrothes haven't been here for generations. The people

> that I knew that I worked with who lived in Kinglassie, you know, they could trace themselves back and of course, it was a mining community"
> (female, 64, nmd, attender).

Participants such as Reg and Bill, articulated socio-cultural differences in behaviour and attitudes between the 'new town' where they resided and the mining areas to which they felt they 'belonged' and identified more strongly with. Samuel and Bill highlighted this further by saying,

> **Samuel:** "There's no', what you call real neighbours here. In Kinghorn, where I was raised, everybody knew everybody, you know and everybody came to your house, had a chat, had a coffee, whatever. Sitting roond blethering[25]. But here no! You don't get that. Folk keep themselves to themselves, very much so" (male, 64, nmd, attender).

> **Bill:** "When I belonged Kinglassie, I knew everybody and everybody knew you. I don't suppose Kinglassie is like that now whereas this place, it's hard to get a hello oot of anybody. If you pass them in the street going for a paper and that it's just hard to get a hello oot of them. You just stop trying after a wee while eh and that's it" (male, 49, nma, non-attender).

The changing nature of neighbourhoods in Fife over generations has undoubtedly affected how they are experienced and conceptualised by both residents and non-residents. From the glory years in Fife characterised by high economic productivity and employment opportunities to these now post-industrial areas, the changing economic, political and social conditions have created the circumstances for many of these places to have slipped into decline.

Wakefield and McMullan (2005) have outlined the ways in which places are perceived by those outside or inside its boundaries. They suggested that place interacts with, or is positioned within, existing social, cultural and economic structures that directly impact on the development or reputation of a place. They further highlighted that the social

[25] "blethering" = chatting

construction and interpretation of place occurs "within broad social processes that have differentially benefited certain regions and social groups over others." (Wakefield and McMullan, 2005: 300). Certainly some participants in this research articulated political decisions which, in their opinion, had serious consequences for themselves directly and their areas more generally and which suggested a distrust of officials and outsiders. However, it is worthwhile outlining that perceptions of place and the characteristics which places embody could, to both insiders and outsiders, reflect inferiorities on a number of levels. Some places viewed as unpleasant, undesirable or unhealthy may be perceived entirely differently by local residents (Greenberg and Schneider, 1996). For instance, Fergus highlights the contradictions inherent in place. From certain outsiders, his hometown was disparaged, but to him (although he recognises its negative points), it is home:

> **Fergus:** "Well it's like any place else. It's got its good areas and its bad areas. The folk, to me, are really friendly, but sometimes you get the occasional, I dinnae mean how this sounds, smack heads, coming across and then you've just got tae back off. But Methil is quite a nice area, if ye ken it. If ye ken it, ye might think it's a dirty place but its no' really. The Duke of Edinburgh cried[26] it a dirty place, but all he seen was the docks, the old docks"
> (male, 61, md, non-attender).

[26] "cried" = called

## Conclusion

This chapter has shown that understanding and accounting for place is complex and influenced by myriad factors. It is important to understand that characteristics of place incorporate economic, political, socio-cultural and historical aspects (including the effects of industrial decline), as part of the complex tapestry which constitutes place. These dimensions of place have largely been ignored in health inequalities research. How these factors combine to create the character and distinctiveness of place is important for understanding a) geographies of health b) how social constructions of health and ill health are produced, reproduced and experienced relationally by people *in* place and c) how these influence lifestyles, which includes health-related behaviours. By utilising a variety of methods including quantitative data to 'measure' place and map health outcomes variation, exploring historical geographies of place concerned with Fife's industrial legacy, and participant narratives about perceptions and attitudes to place, these elements, in combination can better illuminate how place can impact health and ill health. It is necessary to be mindful that constructions of place and place effects on health are more nuanced, complex and contradictory than that which areal based deprivation indicators and quantitative causative models propose. These area based indicators, although they are useful, can inadvertently perpetuate inferiorities of particular places, and by extension, their residents. Using a singular method to account for place provides a one dimensional picture of place which does not take fully into account the temporal and the spatial characteristics of place. It is important to situate people within their wider social contexts (such as neighbourhoods) when trying to understand how variations in health and ill health are produced. De-industrialised places characterised in this research as 'mining deprived' and 'non-mining deprived' can be deleterious to health for many reasons, some of which have been highlighted above. It is important to embed participants' experiences of their heart attack and recovery within their social environments, not least because health and ill health experiences are linked and mediated through gender, age and other determinants which structure health perceptions, attitudes, lifestyles and behaviours. Connecting and rooting people in and to particular places recognises that people and places are co-constitutive and this approach

taken thus far within this research attempts to contextualise place more broadly using mixed methods to untangle how and why health inequalities may manifest within place (Graham, 2001; Kearns & Moon, 2002; Johnston, et al., 2000).

The next chapter will explore men's and women's constructions of their heart attack. The often disruptive and shocking nature of having a heart attack and the ways men and women make sense of such an experience will be discussed. The focus of the chapter is on the ways men and women respond to and make sense of the heart attack. The impact of the heart attack on their physical, emotional and psychological well-being is explored and contextualised as impacting on their normal day to day lives, situated in place.

# Chapter 5: Exploring men's and women's constructions of their experiences of heart attack

## Introduction

Within this chapter men's and women's experiences of their heart attack will be presented. Exploring real life experiences from those who have suffered a heart attack is crucial to gain understanding of experiential accounts of health and ill health but also to illuminate that the complexity of such accounts takes place within wider social contexts where people live their lives (Popay et al., 2005). In the previous chapter, several perspectives were presented from participants about how they experience their neighbourhood and perceive other areas. In this chapter, findings will be presented regarding how they experienced their heart attack. There was a limitation in the research insofar as participants were not asked *directly* to link their health/ill health to the characteristics of their area. However, building on understandings of the importance of place for health, participants talked about their experiences of heart attack within the context of their everyday lives and often participants used temporal terms (e.g. before and after the heart attack) to illuminate how their heart attack has impacted on their day to day lives in place.

Exploring lay perspectives of heart attack experiences can be complex and untangling geographic aspects of health from socio-cultural, historical and economic structures and personal experience is difficult (Clark, 2003) and may not lead to necessarily sharp conclusions. However, lay experiences can illuminate the ways other determinants such as gender and age for example, intersect to create, enhance or exacerbate differences, not only in how men and women make sense of the heart attack experience, but also how they respond to it. It has been stated in Chapter 2 that there is a need to explore men's and women's experiences in greater detail because women's experiences of CHD and heart attack have been largely ignored due to the focus on men's cardiac experiences (White et al., 2007; Jackson et al., 2000; Albarran et al., 2007). Although men's experiences of CHD and heart attack have received attention, certain aspects of their

experiences are less well known, particularly how masculinities impact on their experiences and responses to heart attack (Emslie, 2005; Emslie and Hunt, 2009). In addition, the shocking and disruptive nature of the heart attack and gendered constructions of heart attack could have implications for help seeking and recovery responses in different ways for men and women.

It has been stated in Chapter 3 that gender emerged as an important category during the analytical stages of the research. The final participant sample was based on the categories of whether participants were resident in 'mining deprived', 'non-mining deprived' and 'non-mining affluent' areas of Fife, and whether they engaged with cardiac rehabilitation or not. Therefore, the final sample of participants included 39 males and 11 females and as such there was a gender imbalance within the sample. Nevertheless, although there may be a greater diversity of responses from men due to a wider variety and number of men having been interviewed, the following themes which are to be explored and presented here propose that gendered constructions of heart attack experiences are present and can be illuminated, despite the imbalance. The importance of issues of gender and heart attack experiences was constructed from and grounded in the data (Charmaz 1995; 2003). As an analytical category, it was not preconceived but rather it emerged inductively during analysis because subtleties and differences within and between participant accounts were being revealed. This chapter will be structured in the following ways with men's and women's experiences of their heart attack organised around three main themes. These themes are firstly, 'disruption to the self', secondly, 'making sense of the experience' and thirdly, 'impact of the heart attack.'

## Disruption to the self

The heart can be understood as a biological organ, pumping blood around the body, but beyond this, the heart is also infused with social and cultural meanings. The heart is invested with meanings which are deeply embedded and often used to convey strong positive and negative emotions, such as love, loss, courage and honesty (Niemeier, 2000) Statements such as 'broken hearted'; 'kind hearted'; 'taking things to heart', or 'home is where the heart is' locate the importance of the heart, not only as a fundamental life

giving organ, but at the core of the self. The effect of a heart attack on the self can often provoke powerful reactions which can rupture an individual's sense of security and the often sudden onset and surprising nature of a serious condition, such as a heart attack, can "assault the body and threaten the integrity of the self" (Charmaz, 1995:657). Merleau-Ponty (1996) has theorised that the body is a lived whole, that one *is* one's body which anchors and provides access to the world. A serious illness can disrupt this relationship and can be exclusionary. During illness, taken for granted everyday activities can become more challenging because there is a loss of freedom and participation in one's 'normal life' (Gadamer, et al., 1996; Toombs, 1988). Health is often taken for granted until ill health occurs, yet both health and ill health are phenomena that can be understood as "material, experiential and culturally contextual [whereby] disease affects organs and cells, but also affect[s] experience and identity" (Fox, 2011). Experiences are shaped by a variety of sources, including social institutions and cultural beliefs, in addition to biology (Cromby, 2005; Turner, 1996). Medical views of the body and disease penetrate how health experiences are shaped and understood, but illness experiences also have social dimensions, which are produced in and through place, embedded within local and wider social structures and influenced by a variety of different dimensions. Understanding men's and women's constructions of their heart attack can illuminate that their experiences are not homogenous, nor "biologically and socially neutral" (O'Donnell et al., 2004: 119) but anchored to and within different habitus which can contribute to how the heart attack itself is experienced and responded to.

Given the different social and medical constructions which exist for the heart and the body, it is important to pay close attention to gender differences when exploring participants' beliefs about their heart attacks. Gender identities are produced in and through place (Massey, 1994) and cannot easily be separated because social practices, interactions and ways of thinking about and representing place and gender are interconnected and mutually constituted (McDowell and Sharp, 1997). Therefore, it is expected that there may be differences (some overt, some subtle) within the accounts of heart attack experiences by men and women and these will be observed between people from different social areas identified in this research as belonging to 'mining deprived', 'non-mining deprived' and 'non-mining affluent' areas. The production of gender occurs

in and through place, as does the production of health (and ill health). The heart attack experience, which is the leveller for all the participants in this research, is likely to be variably and differentially experienced by men and women.

For the fifty participants in this research, the common factor was that they had all recently sustained a heart attack. The unconscious functioning of the heart is juxtaposed after a heart attack for many participants because the heart which was once taken for granted cannot wholly be relied upon (certainly in the immediate aftermath). The in-depth interviews were conducted in participant's homes on average 14 weeks after they had sustained their heart attack and participants at time of interview were at different stages of adjusting to their heart attack experience. However, the disruptive nature of the heart attack to their everyday lives was a common theme for both male and female participants, which certainly raised important issues for making sense of their bodies, adapting to life post heart attack and the implications these issues can have for their overall recovery. Sustaining a heart attack has often been described in previous research as a traumatic, shocking and disruptive occurrence (Kristofferzon et al., 2007; Allison and Campbell, 2009) and it was clear in this research that participants had similar reactions with articulations of shock and disbelief being commonplace;

> **Adam:** "I mean when I had my heart attack I was no' really believing it. I thought they'd made some kind of terrible mistake. I didnae believe that it was actually happening" (male, 44, nma, non-attender).

> **Winston:** "..after getting the heart attack I was kinda upset I'd taken a heart attack. I always thought that I was fit enough, ken. It kinda knocked my legs away, you know. When I took it, I said 'it cannae be. It cannae be"
> (male, 67, nma, non-attender).

> **Carol:** "I got a fright. I really did. I must admit I was the one that when the paramedic told me that I'd taken, that I'd had a heart attack, I just said to him 'Me? No. No' me. I've no' had a heart attack.' It just couldnae sink in"
> (female, 75, md, attender).

Recounting the heart attack event highlighted a vulnerable and frightening time for many of the participants and there was a sense that the experience had for some, in subtle and tangential ways, altered their sense of self and their identity.

The body site is the primary location where personal identities are constituted and social knowledge and meanings inscribed (Valentine, 2001), but the often mysterious nature of a heart attack and the reason it occurred when it did, gave some participants a sense of alienation and distancing from their bodies. Indeed one participant, Helen, described the experience as follows,

> **Helen:** "it's sort of surreal! (laughs) You know, I cannae imagine it happening tae me and some days I wake up and think, 'what really happened? You know?" (female, 66, md, non-attender).

The disbelief and uncertainty surrounding the heart attack and the effect that this had for participants' sense of self can be seen to be embedded in constructions of the heart attack. The heart represents more than a functional organ and there is a sense that the once taken for granted heart (and thus the body) is compromised. The unsettling experience was sometimes discussed in temporal and spatial terms by participants who indicated where and when it happened. For example, Neil and Andrew recounted their banal, normal everyday life experiences which were subsequently disrupted when their heart attack occurred;

> **Neil:** "I was doing some shopping. I think I popped into the chemist or whatever or had my hair cut or something or other. I just went over there for normal domestic reasons and I ended up in hospital. Just dropped dead. My heart just stopped. No indication. No pain. No difficulties breathing. My heart just stopped and I just fell to the ground" (male, 69, nmd, non-attender).

> **Andrew**: "I was lying in bed, about 11.30 at night. I just went up the stairs, got undressed, got into bed, getting myself comfortable, when WHAM! Just like that it hit me. It was unbelievable. Once I started to recover in the hospital

> the next day, I, well, why? Why did that happen to me? I'll never understand that" (male, 76, md, non-attender).

The disbelief and shock of sustaining a heart attack is highly significant because it indicates that people overwhelmingly take the heart for granted *until* a heart attack occurs. It has also been argued, that the disruption caused by a heart attack influences reflections about one's situation and these appeared to be a common feature for both men and women who had sustained a heart attack (Dixon et al., 2000; Jensen & Petersson, 2003). This has potential implications for optimum recovery post heart attack and health policies regarding prevention, treatment and recovery ought to be mindful of the profound effect a heart attack can have for those who have suffered one, and the impact this may have on recovery. In addition, the heart attack experience itself takes place within participant's ordinary, everyday lives, situated in place.

Heart attacks are ubiquitous in our society but the impact of the heart attack for an individual (and others who are connected to them within their wider social networks) must be understood more holistically. In particular, men and women are likely to adapt and adjust differently following a heart attack which can impact on a variety of factors such as accessing health care services and health improvement strategies. Considering how gender (in addition to other determinants) can intertwine to influence heart attack experiences and recovery also requires better understanding (Galdas et al., 2007; Galdas et al., 2010). The often shocking, frightening and unsettling experience of a heart attack often heralds the search for understanding about why the heart attack occurred. This was a common theme for participants in this research and their journey from the initial heart attack through to recovery involved multiple negotiations and ambiguities in their responses and reactions to it. Interpretations of the heart attack experience and making sense of it are couched within and are influenced by many factors, including gender and gendered constructions of heart attack which can affect how participants come to make sense of their experience.

## Making sense of the experience

*Identifying heart attack symptoms and responses*

It has been outlined in Chapter 2 that the prevalent gendered social construction of coronary heart disease is still most often considered 'male' with women being viewed as less at risk of CHD and unlikely to view themselves or be viewed as 'coronary candidates' (Lockyer and Bury, 2002; Emslie et al., 2001; Davison et al., 1991). Coronary candidates are represented as stereotypically overweight, red-faced, smokers who are inactive and who have a poor diet and commonly these 'candidates' are more often perceived as male (Davison, et al., 1991; Emslie et al., 2001). Previous studies have suggested that although the perception of CHD and heart attack as a 'man's disease' prevails, more recent research exploring men's experiences of heart attack in White & Johnson's (2001) study highlighted that men do not necessarily see themselves at risk from CHD. In addition, aligning the stereotypical 'coronary candidate' image to one's own sense of self can be problematic for men (Clark 2003; Brink et al., 2002). For women, the perception of a typical 'coronary candidate' and prevailing gendered construction of CHD can impact on how they attempt to make sense of why the heart attack occurred and complicate attributing symptoms to the heart. For female participants in this research (n = 11) who ranged from 50 – 75 years of age there were a number of reactions to having a heart attack. Perhaps, in part, due to the prevailing gendered construction of heart attack, a heart attack was not often considered a reason for their ill health and was usually the last thing on their, and others' minds.

> **Vivian:** "It just came totally out of the blue. I was fine. We were out and my husband had just bought me the car and that was the Sunday and it was just like having really bad indigestion and I went to the hospital and they sent me home with a bottle of Gaviscon and then on the Monday night that's when it all sort of kicked off. I never had any symptoms whatsoever prior to that and I had nothing just what they told me that I had severe gastroenteritis, that's what they said I had. But no symptoms whatsoever. Just out of the blue" (female, 54, nma, attender).

**Celia:** I was having angina, aye. But nut, I never thought, I never even thought about my heart, nut. But when I took the heart attack, well it was my throat and it was going doon my spine, my neck and my spine, doon the back here, I wisnae[27] even haying the pain at the front of my chest, although occasionally it did come. Like it come through and I mean I had them quite a few times but I think they were, as time was going on, they were getting kind of worse, and like that Sunday, I think I had two that morning and that one before I had the heart attack was really, really bad, and then I started to feel it coming through to my chest. And then I says to my husband, ' there's something wrong' because I mean when it come on it was just, oh it's the most, I cannae even explain what it's like. It's horrible. It's sore but it's, I cannae say it's a pain, a shooting pain or anything, it's just no' like an ordinary pain. But what was weird about it was when I was in the hospital and I was speaking to one of the nurses and I thought ken, there in your throat, I wouldnae have thought. She says, oh, she says 'you can get it', she says, 'a lot of women get it in their jaw' and I went, 'Oh', when she said that. Because the week before that I had woke up and my jaw was kind of funny here and I was getting this bloody sensation going doon it, ken, and I thought, oh, and it was like that for about two days and whenever she said that I thought, I wonder if that's been another sign, ye ken" (female, 57, md, non-attender).

**June:** "I still couldnae believe I had a heart attack, if ye ken what I mean. My husband thought that it wisnae heartburn and he says I'll need to see aboot it but NHS 24 were nae good so they said go to see a pharmacist. So I went and told my pharmacist and it was them that suggested I went to the hospital. My husband phoned the hospital for me and got me an appointment with a doctor and says can we take her up? And I'm going "I'm fine, I'm fine, I'm fine." The doctor's giving me Gaviscon. Aye, that's alright, aye. It's just a wee bit niggly pain here. And she's going, "hmmm". Next thing the paramedics came and they've eyed me up and they've gone, "it's a heart attack" and I'm going, "no, I'm fine, I'm fine." I just couldnae believe it was a heart attack, ken? It's no' whit I thought having a heart attack would be like,

[27] "wisnae" = wasn't

> eh. 'Cause my dad died wi' a heart attack. I lost my dad. My dad was quite young. He had his first heart attack when he was my age"
> (female, 50, nmd, non-attender).

The narratives from Vivian, Celia and June illustrated their surprise at having a heart attack and their experiences highlighted a variety of contradicting and conflicting perceptions and reactions to what was occurring in and to their bodies. These can be seen in their understandings and appraisal of the symptoms and sensations, responses to them, and their (and others) misunderstandings of the 'warning' signs of a heart attack. In Vivian's case the heart attack symptoms were mistaken for a stomach bug. For Celia, her throat and jaw pain were a mystery to her until their existence was linked by a nurse to be a potential warning sign of a heart problem. However, for Celia, having a pain in her throat and jaw were not at all linked by her as a 'warning' sign of a heart attack. In June's case, there appeared to be a delay in receiving appropriate treatment despite consultation with a number of health agents (NHS 24 helpline, a pharmacist, and a GP) before finally, the paramedics were called, and confirmation was given that June, had indeed, suffered a heart attack. These contradictory and ambiguous expressions of the heart attack for female participants and the sensations experienced leading up to the event were also illustrated within a number of the other female participants' accounts.

Downplaying physical sensations (for example, indigestion, angina and other types of non-specific discomfort) in the immediate period preceding the heart attack were recollected. More than half (n=8) of the eleven female participants reflected that they had experienced pain or discomfort in the weeks before the heart attack, but they made little or no association between these sensations and them being a warning for heart attack. In Chapter 2 it was highlighted that women were more likely to highlight 'atypical' symptoms such as pain sensations in the jaw, like Celia reported. Other 'atypical' symptoms include pain in the neck, stomach and back (Sjöström-Strand and Fridlund, 2008). In other research conducted by McSweeney et al., 2003; Efre, 2004 and Rassin, 2009, by contrast, men reported the location of their pain, as being most commonly present in the chest, although, within this research, this will be highlighted as not necessarily the case and men also had difficulty attributing signs and symptoms they had

experienced prior to their heart attack as being related to a heart problem. For women in this research they had assumed that the sensations they were experiencing had little or nothing at all to do with their heart. These interpretations were couched within wider social and medical constructions of heart disease which overwhelmingly portrays heart attacks as a male disease which may lead to uncertainty for women. It is conceivable, therefore, that common representations of heart attack candidacy which is most often equated as 'male' could exacerbate and further contribute to the disorientating and unsettling nature of women's heart attack experiences. Social (and medical) constructions of heart attack which women in this research were aware of would not necessarily view them as heart attack candidates, nor did these women necessarily perceive themselves to be at risk relative to their age, their lifestyles and the knowledge and information they had about heart attacks. For example, women's hormones are often cited as a protective factor for heart disease. However, this is questionable as often women are excluded from research into CHD specifically because hormonal levels and changes during a women's life cycle make scientific interpretation of results more difficult (Barrett-Connor, 2007). Nevertheless, this was a commonly held belief by women (and men) to be a protective factor from heart disease. Vivian, Celia and June were female and in their fifties, so their narratives illustrated heart attack experiences from the younger end of the spectrum. Females tend to develop heart disease 10-15 years later than males (Emslie and Hunt, 2009; Fodor and Tzerovska, 2004) but these 'premature' heart attack experiences can be even more unsettling given the paucity of information about women's heart attack experiences in general, and for younger women in particular. These factors can combine to influence the framing of CHD and heart attack as a predominantly male affliction and could certainly lead to females downplaying their level of risk and distancing themselves from the possibility of sustaining a heart attack in the first instance or indeed, being at risk of subsequent heart attacks.

Lena and Elspeth had both previously experienced a heart attack yet their prior experiences did not necessarily prepare them for recognising their subsequent heart attacks. Lena highlights this below,

**Lena:** "It was nothing like the pains I had with the first one. Nothing like it at all. I thought it was my indigestion playing up."

**Sarah**: "The symptoms were different?"

**Lena:** "Oh yeah. Totally different."

**Sarah:** "Had you gone to the doctors about your indigestion?"

**Lena:** "Oh yeah and she said that my blood pressure was sky high. She asked where the pain was and I told her and she said she thought I was having a heart attack. I says, no that it was indigestion and she said no, that I was having a heart attack. She sprayed some of that stuff in my mouth and the pain went away and she said it was a heart attack. The night before I'd been up sick and having pains which was why I went to the doctor 'cause I thought the [stomach] erosion had gotten worse. I seemingly had had a slight heart attack during the night and another at the surgery. So, I was rushed to the hospital and that was it" (female, 62, nmd, non-attender).

In Lena's case, she had sought medical treatment for what she perceived to be her indigestion. She misidentified her indigestion with her other co-occurring health problem concerning her stomach erosion, when in fact she had experienced another heart attack at home and then had a subsequent heart attack whilst with her GP. Her embodied experience of her heart attack was somewhat overshadowed by the importance she placed on her stomach/indigestion problem as the cause of her discomfort and pain.

For Elspeth, who had previously sustained two heart attacks, her reaction to her recent heart attack experience was mediated by other factors. The timing of the heart attack and where it occurred were problematic as it was Christmas day and her family was present. Her desire to fulfil her role as mother and host on Christmas Day for her family and not 'spoil their day' by needlessly worrying them was apparent.

**Elspeth:** "I didnae even think it was a heart attack and I just thought I'd taken this bad indigestion. I was just sitting watching them open their Christmas presents. They were sitting tearing the paper and I went up the stairs and took 2 Alka Seltzer cause I didnae want to spoil their day and I come doon the stair and my pal come in with my Christmas present and she says ' you alright?' and I just shook my head. She says 'you look terrible' and she said 'Nicky!' and Nicky looked up and said 'you alright Mum?' and I says 'No hen.' And that was it. I says I think it's a heart attack."

**Sarah:** "Had it felt different from your other ones if you can remember?"

**Elspeth:** "I didnae hae a pain. Aye with my other ones I had a really bad pain. It was a pain but no like before and I just thought it was indigestion. The pain itself wasnae, well, just that horrible feeling you get when you have indigestion and thinking the tablets would help but when they didnae help after I come doon the stair and that and it was still there, I thought this is more than indigestion. That's when I knew it was tae dae with my heart"
(female, 73, nmd, non-attender).

From both Lena and Elspeth's accounts of their current heart attack and from the other female experiences, a number of key issues arise. It could be that prevailing social constructions of coronary heart disease (including heart attacks) could influence how embodied heart attack experiences are interpreted and reacted to by these women. Lena and Elspeth had previously experienced what a heart attack felt like. The dissonance between their previous heart attack experiences and their current heart attack experiences were perhaps a result of the length of time between the cardiac events. Life returned to normal and the body (and heart) were taken for granted again. Neither Lena nor Elspeth thought they were in danger of another heart attack, and both articulated this. For Lena, it had been 5 years since her last heart attack and for Elspeth, 8 years. Female participants in this research outlined symptoms and sensations which may not directly correspond with 'common' male symptoms (which are often considered the 'norm') and a lack of empirical research examining gender differences in heart attack experiences is partly responsible for this (Emslie, 2005). Physical symptoms such as

indigestion may well be confused with angina pain and pain in the jaw may indicate referred chest pain and may point to 'warning signs' for a heart attack, but uncertainty about these heart attack warnings can result in women misunderstanding symptoms which can lead to heart attacks, downplaying the severity of their bodily sensations and delaying seeking help (Schoenberg, et al., 2003). There is evidence that the women in this research experienced uncertainty about symptoms. Also, gendered social roles for women which often include managing the nurturing and care-taking of others, for instance partners, children and relatives, may be implicated in their downplaying and denying symptoms and sensations. This gendered role could interfere with taking care of themselves due to putting others first before themselves and giving a lower priority to their own health (Richards et al., 2001).

For men in this research there was evident surprise and shock at sustaining a heart attack despite the widespread social construction of heart attack being constructed as 'male'. The majority of men in this research did not believe they were candidates for having a heart attack despite many of the men having vulnerabilities toward coronary heart disease risk relative to their age, social position and lifestyle factors (which are contributory factors for coronary heart disease). The majority of male participants, for example, were current or past smokers, a major risk factor for CHD. Increasing age is also a risk factor for many illnesses, including CHD and heart attacks. Men in this study ranged from 44 to 81 years of age and it is known that males tend to develop heart disease earlier than women. (Emslie and Hunt, 2009; Fodor and Tzerovska, 2004). However, in this research, there were a number of men who could be considered young to have sustained a heart attack. Of the 39 men in total, six were in their 40s and six were in their 50s, with the youngest being 44 years of age. Certainly the age of some of the participants may have reduced their perception of being at 'risk' of sustaining a heart attack. Common social and medical representations are not often sensitive enough to distinguish between "male heart attack candidates" and "younger, male heart attack candidates". For those men in this study who were younger, the heart attack shock and disruption can be compounded and influence responses to and recovery from heart attack differently compared to those men, for example, who were older or those who had previously sustained a heart attack. Common representations of the typical heart attack

candidate do not often equate relative youth with being at risk of heart attack. For many of the male participants, regardless of their age, the heart attack still came as a shock which Laurie and Jason highlighted,

> Laurie: "I was gobsmacked when I had a heart attack"
> (male, 59, nma, non-attender).

> Jason: "Anyone ye might've kent who had a heart attack was usually an old guy eh? An old person, not late 40's" (male, 48, nmd, attender).

Similarly shared with the female participants, a number of men articulated uncertainties regarding symptoms and sensations prior to the heart attack. For example, Joe 'expected' more typical chest pain, Samuel thought that something was affecting him but wasn't sure what and Laurie thought that his indigestion was ordinary, rather than as a sign of a more serious problem,

> **Joe:** "I mean I was under the impression that a heart attack was a sore sort of chest or ken, arm or something like that. I never knew it was, well, apparently it's quite a common thing this sore jaw. I mean, I had nae idea I was gonnae hae a heart attack" (male, 74, nmd, non-attender).

> **Samuel:** "before the heart attack I felt as though there was something going on as it happens. Maybe I was pushing myself a wee bit too much and it was starting to affect me, you know. But I didn't realise it was the heart that was going wrong. It just shows you" (male, 64, nmd, attender)

> **Laurie:** "I didn't have a conventional idea of a heart attack. I had been having warnings but I thought it was indigestion so when I was having this heart attack, even the ambulance driver didn't think it was a heart attack"
> (male, 59, nma, non-attender).

It was recognised in a small number of men's experiences that few, if any, warning signs or symptoms leading up to the heart attack had been experienced. The heart attack took

these men completely by surprise. The men reported that they had given little consideration to the possibility of suffering a heart attack prior to the event,

> **Philip:** "I wasnae expecting it because I kept myself very fit. It came right out of the blue. I wasnae expecting that at all" (male, 66, nma, attender).

> **Ray:** "I never, ever gave it a thought. I never, thought about it. Being non smoking, non drinking and relatively fit for my age, I never thought I'd have a heart attack. I didnae. I was surprised to have it" (male, 60, md, attender).

> **Greg:** "I'd been getting really bad night sweats for months, but again, that's no' something that I would recognise as being a symptom of a problem with my heart or anything" (male, 48, md, attender).

> **Peter:** "Had I been suffering angina and things they could've done some research there about the lifestyle side of things and whatever, but it just came right out of the blue and it's taken everyone by surprise"
> (male, 58, nma, non-attender).

It appears that for these men, the heart attack occurrence was a surprise whereas for others, niggling symptoms and sensations leading up to the heart attack were experienced, sometimes for quite long periods of time, but downplayed or denied. In the case of Adam who was shocked and surprised at having a heart attack (highlighted above) he was potentially demonstrating his masculinity (and relative youth) by denying problematic symptoms and not seeking help sooner to establish the cause,

> **Adam:** "I did have a pain in one of my arms for a long time. Lots of niggly things but lots of things you would shrug off. The pain in my arm I remember thinking I'd deal with it later on" (male, 44, nma, non-attender).

For a small number of men, however, the heart attack did not come as a surprise,

> **Reg:** "I think it was my age just caught up with me. It was going to catch me one day. I just put it down to age, I did. I just wondered when it was going to

> happen. I was surprised I got away with it for so long cause a lot of my pals are no' here now. I'm lucky" (male, 74, nmd, non-attender).

In the main, however, the majority of male participants were shocked and surprised at having a heart attack. For the six men who had previously sustained a heart attack, the ways in which these men discussed their recent one compared with their previous ones gave further indication of how they constructed their health. For example, Douglas had sustained a heart attack around ten years ago. He was additionally bothered with a number of other limiting conditions and expressed that he had been feeling "absolutely terrible" since his most recent heart attack,

> **Douglas:** "actually I've been quite surprised, because the first heart attack knocked me back, but gradually through rehab, God I was… I was fitter than I had been for years. And my wife and I used to regard that heart attack as a blessing in disguise."
>
> **Sarah:** "But for this one, this current heart attack that you've had recently, have you noticed any difference?"
>
> **Douglas:** "Yes. My performance pretty well in everything is reduced significantly and I'm surprised by it. I didn't expect it. I mean I expected be in hospital, do the rehab thing, work at improving, but that hasn't happened" (male, 74, nma, non-attender).

What was apparent from Douglas' account in particular was surprise and dismay and his awareness of the reduction in his physical strength and capabilities compared to when he had his last heart attack ten years previously. His surprise at having another heart attack and his diminishing physical abilities were a loss for Douglas but it was complicated by the fact that he was additionally burdened with a number of other conditions which in combination with his recent heart attack curtailed his ability to do 'normal' taken for granted activities.

> **Douglas:** "I've got these, what I regard as three major conditions: the heart thing, the Parkinson's which is progressive and COPD[28] which I don't really pay much attention to. In fact, I don't pay a lot of attention to any of them and it's quite difficult sorting one out from the other. And so if I have a really bad day, I spend some time trying to work out, was that the Parkinson's? No, it must've been the cardiac thing. When you get to 74, it's not that you become obsessed with health. You simply have to face up to the realities of having once been reasonably fit and you are no longer. And I sometimes go down to the doctor's surgery and sit there and find myself thinking, 'Look at these old gits sitting about', and I'm one of them"
> (male, 74, nma, non-attender).

Within many of the men's accounts, there were uncertainties about being at risk of sustaining a heart attack, even when 'warning' signs had been experienced. Disregarding the possibility that their bodies were in discomfort or vulnerable to ill health potentially serves as a way for men to reinforce their masculinity. It is often the case that men believe caring for health is women's responsibility and this can have consequences for their health (Popay & Groves, 2000). In addition, another way for men to demonstrate masculinity is by abrogating responsibility for their health to women and most notably in this research, to their wives or partners which concurs with findings from Brink et al., (2002) who highlighted that men were initially more likely to seek advice from partners and relatives about their health. In this study, 31 of the 39 male participants were married and although not overtly stated, there was the assumption that taking responsibility for health was within the domain of female responsibility. For example, Winston stated that,

> **Winston:** "When I took the heart attack, I knew it was a heart attack whenever it happened. My wife happened to be out that day, so I was just hanging on hoping she would come back and get the ambulance organised. And hoping the pain would go away actually, but needless to say it didn't"
> (male, 67, nma, non-attender).

[28] COPD – chronic obstructive pulmonary disorder

Relinquishing responsibility for health in this way suggests that men may be more inclined to adopt the 'sick role' (Parsons, 1951). Simultaneously, however, the tendency in some cases to delay or deny symptoms can impact how men respond and this can increase their discomfort, pain or overall health risk which was the case with Winston who waited some time before he finally called an ambulance. Additionally, foregoing help (until it was absolutely crucial), not making a fuss and being stoical, as well as not wanting to waste national health service time or resources by downplaying the seriousness of their symptoms, was evident within a number of the male interviews. Gavin and Philip articulated that,

> **Gavin:** "I'm no' a person, like, if I've got a cold, I dinnae run away to the doctors or anything. But anyway I went across [on day of heart attack]. I had to get an emergency appointment, and I told him the symptoms and he said that I should better get up to the hospital. He said 'Do you want me to phone an ambulance?' The hospital is only across there [points towards hospital]. But anyway, I said no that I'd left the house door open and that I'd just walk up. So this was on the Monday and I walked up to the hospital. Noo, there's a shortcut and there's the long way. I took the long way and I went all the way roond and I went in [to the hospital]. They said that it started off as an angina attack but it's went over to a heart attack. Of course, I told my wife and she was like 'and you walked up after the doctor saying he'd get an ambulance for you!' So, that's me. Glutton for punishment!" (male, 60, md, non-attender).

> **Philip:** "on the 10th of January this year, I had a bit of a sore jaw so I just said to the wife one Sunday morning, cause I'd been, I thought I had indigestion. When ye have an Indian [take away], ye sometimes get a bit of indigestion so I just thought it was indigestion from the meal on the Saturday night. This was 6am on the Sunday morning. I got up 3, 4 o'clock on the Sunday morning swigging the old Gaviscon, as you do and I went back to bed. It wasnae working. So, I told the wife, we're off tae hospital. I didnae want to bring the ambulance out cause the roads were really bad out here with ice and snow so I just thought we'll have a slow wander down to Kirkcaldy. Save the ambulance trying to get here and avoid an accident on the way."
> (male, 66, nma, attender).

Within the male accounts however, there were differences among the participants and the ways in which they demonstrated their masculine identities regarding their reflections, interpretations and analyses of their heart attack experience. As stated in Chapter 2, masculinities are not homogenous, nor are they fixed. They can be multiple (Emslie et al., 2006; O'Brien et al., 2005; 2007; Robertson, 2006). Hegemonic masculinity (Connell, 2005) asserts that 'masculinity' often relates to the stereotypical physically strong, dominant, independent, stoical, emotionally restrained man, disinterested in his health, who often delays and/or refuses to seek help (Gough, 2006; Robertson et al., 2010). Certainly elements of this type of masculinity can be observed within some of the men's accounts in this research. These may serve as ways to 'protect' their sense of self and masculinity but on the other hand, men in this research often revealed emotional aspects of themselves when discussing their heart attack.

Making sense of the heart attack experience and what was happening within and to participant's bodies raised a number of paradoxes. Men often expressed these changes when comparing their physical capabilities pre-heart attack with post-attack vulnerabilities. The loss of physical ability and feelings of tiredness and an increasing need to sleep or rest were commonly mentioned throughout the male interviews.

> **Paul:** "I find that I get tired now. I'm not as resilient as I used tae be. I could work away all day and just keep going, keep going and keep going. I find noo, I cannae dae that. I get tired and I've got tae say "alright. Enough's enough" (male, 62, nma, attender).

Similar to Douglas' view (highlighted earlier) of his reduced physical capacities, Philip alluded to changes in his physical capacity and increasingly experienced feelings of tiredness after his most recent heart attack,

> **Philip:** "I'll put you in the picture of what actually happened. Two and half year, nearly three year ago now, I come home from my bridge on a Thursday night and I just couldnae settle in bed at all. I was up and doon. I had no pain or anything like that, just agitated. Even went into the spare room 'cause I

was wakening her up, tossing and turning and all this carry on. So on the Friday, I went to see the doctor. Told him the only symptoms I had at the time were a very sore jaw, very sore jaw, just aching. To let you understand I was quite fit at that time. I used to go to the gym 4 times a week, swam 3 times a week. I was quite fit for my age eh. Anyway, [after the first heart attack] the bottom line was there was a bit of damage done to the heart and because I was so fit and that, they put me on their silly treadmills [at cardiac rehabilitation] and that. I could do that walking on my hands, rather than walking on my legs at the time cause I was very fit. So, the bottom line was, I went, did my thing there, went to the cardiac rehab, went through all that, went back to the gym, doing all that, doing quite well but I kind of tailed off to the end of last year. I just didnae feel up to it so I think something was making me tired, eh. And then on the 10th of January this year, the same thing was happening again" (male, 66, nma, attender).

References to physical fitness and strength (or stamina and endurance) before their heart attack was a common strategy for men to reiterate aspects of their masculine identities. High levels of physical fitness, mastery and stamina, as well as endurance, most commonly expressed related to work/employment contexts, were frequently outlined. These were more commonly highlighted for younger males (especially those in their 40s and 50s, who considered themselves to be very fit before the heart attack). Peter, Isaac and Adam demonstrated this,

**Peter:** "I was very fit prior to having the heart attack. We're very active as a family. We do rock climbing. I mean before I had the heart attack, I mean we were rock climbing twice a week down in Ratho at the centre there. We try to ski every year for a couple of weeks. We go into the mountains every summer for three weeks and we go there whenever we can. We're very active in that respect which is where the, actually having a heart attack came very much as a surprise" (male, 58, nma, attender).

**Isaac:** "Yeah, well I used to exercise a lot. I used to go to the gym two or three times a week for two or three years" (male, 56, nmd, non-attender).

> **Adam:** "I used to run for fun. We did a course at work about three or four years ago which was run by an SAS captain. It was kind of an endurance test, psychological as well. A group of us would work in teams and it would involve long walks over the canals and on the last day I ran seventeen miles and moved eight of those canal locks. You don't realise you're doing it. You're achieving things you wouldn't think you could achieve. It's quite cleverly done. So, I always thought I was quite fit" (male, 44, nma, non-attender).

The recognition of depletions in physical ability and stamina post heart attack may jeopardise men's sense of their own masculinity and raise uncomfortable feelings. Reiterating their fitness and strength prior to the heart attack in some ways allows men to distance themselves from their bodies. Thinking about the body and not being necessarily able to control how it is behaving or working, as well as being aware of their physical vulnerabilities after the heart attack raised dilemmas and uncertainties for men. Women also expressed changes to their physical capacity with tiredness and an increased need to rest commonly articulated. However, the wider impact the heart attack had on men and women related to their physical, psychological and emotional wellbeing, including changes to their day to day activities and participation in social life. These were different in many cases and these will be discussed in more detail in the final section of this chapter under the theme of the 'impact of the heart attack.'

Other ways the heart attack was made sense of was in the tendency for some of the men in this research to use mechanistic terms and metaphors to describe what had happened. It has been stated earlier in this chapter that the heart is bestowed with many social and cultural meanings. The 'heart as machine' metaphor is a strongly masculine image which has shaped the social construction of heart disease (Emslie and Hunt, 2009). These types of mechanical metaphors were most commonly used by men in this research as approximately a quarter used these types of descriptions to convey their perceptions and understandings of their bodies.

> **Ray:** "They describe yir body as a car engine. I mean your heart is the oil pump. I mean if the oil pumps pack up in your car, you pack up!"
> (male, 60, md, attender).

> **Daniel:** "well if it's the pure mechanics and taking it on the pure mechanics, I understand [the heart attack] fairly well" (male, 74, nma, non-attender).

For a few participants, the heart attack was akin to an annual check-up – a blessing in disguise, which necessitated essential bodily maintenance in order to keep going.

> **Jack:** "I regard all this, to really sum it up, as a bit like an MOT. It's a fortunate thing that's happened to me because having it happen [and] having the treatment and making these adjustments to diet and other aspects of life should mean that I'm good for another twenty years plus" (male, 66, nma, attender).

For two male participants who had previously sustained a heart attack, they stated that the reason for their most recent heart attack was,

> **Douglas:** "Just general deterioration. I mean, I really do regard myself as being like an old motor car. It's twelve years old and bits are dropping off it!" (male, 74, nma, non-attender).

> **James:** "I dinnae ken. It's just one of those things. That's what I say, doll. I mean how does it happen? The day it happened, the ambulance boys come fir me and they says I needed another MOT" (male, 77, nma, non-attender).

These quotes suggest that for some men the social representation of the heart as a machine is a useful tool for describing their illness experience – that it makes sense for them. These work to express their heart attack experience and provide a somewhat reductionist explanation for what has gone wrong with the heart. These serve potentially as an emotionally neutral way to describe what occurred without potentially exposing (to a young, female researcher) on-going feelings of vulnerability which the heart attack provoked. Given the shocking and disruptive experience of a heart attack and the ways in which it can disrupt normal everyday life, taking a functional or mechanistic view of the body can act for some men, as a way of re-negotiating or re-establishing their masculinity in light of a vulnerable and emotional experience. The use of mechanistic metaphors

shows that some males are adopting commonly used and traditional constructions of coronary heart disease to make sense of their experience.

None of the women described their experience using mechanical metaphors whatsoever which is contrary to research conducted by Emslie et al., (2001) which found that both men and women used these types of metaphors to describe heart attack experiences. However, the smaller sample of females in this research makes this finding inconclusive, but it suggests that for women in this study their experiences may not 'map' onto those of men, and not using mechanistic metaphors to describe the body suggests that women may have different ways of articulating and making sense of their bodies and their heart attack.

## Making sense of the experience

*Understanding 'cause'*

As stated above, the majority of participants did not believe they were at risk of having a heart attack with many participants, both male and female, not seeing themselves as heart attack 'candidates'. This section will outline what participant's believed 'caused' their heart attack. Diseases, such as heart disease, which has been a topic of health promotion campaigns, are more likely to be described by lay people as being related to lifestyle (Calnan, 1987, Hansen, 2003). However, lay explanations are often presented in complex narratives (Davison et al., 1991) and these rarely define the cause of disease in terms of only one cause or risk. People then might attribute illness to a wide range of possible causes to which they give meaning by locating them within the wider context of their lives (Hansen and Easthope, 2007).

As stated in chapter 3, the brief Illness Perceptions Questionnaire (IPQ- brief – Broadbent et al., 2006) was included within the interview schedule and incorporated questions which assessed participants' perceptions of their condition, such as the perceived cause of their heart attack, the consequences and impact of it both physically and psychologically, as well as asking how long they thought their illness would continue and whether or not their treatment could help. These questions assessing participant's illness

perceptions were supplemented with open ended follow-up questions that were able to probe participants' answers in more detail and provided participants with an opportunity to further discuss their illness perceptions. Additionally, it was possible to show an overall score for each participant representing the extent to which the illness was perceived as either threatening or non-threatening. A higher score reflected the belief that the illness was more frightening or threatening. The minimum score was 0 and the highest score was 80. The range of scores for the fifty participants was between 4 and 63. The mean score was 33 (SD: 14.33) suggesting quite a degree of variation in participant responses. The answers to the brief IPQ question regarding 'cause' of the heart attack resulted in the following findings.

The most common cause outlined by participants was smoking. Sixteen participants ranked smoking as the number one factor for causing their heart attack. However, fourteen participants did not know what caused their heart attack. Ten participants cited stress and overwork as the main cause. Three participants suggested that genetic and hereditary factors were responsible, with the remaining participants outlining that being overweight and having a poor diet and diabetes were the main cause (n=5), as well as high blood pressure/high cholesterol (n =2).

Nonetheless, when participants were asked to expand on what they believed caused their heart attack there were differing and often contradictory responses. This is important to acknowledge because lay models of 'cause' or 'risk factors' may be quite different to the causative models used by health professionals. Unlike epidemiological concepts of 'cause' which are abstract, population based and mathematical, lay ideas about cause and risk are tied up into each individual's own explanatory models with common-sense understandings produced and re-produced in relation to gender, age, social position, family and wider contexts (Bunton et al., 2003; Emslie et al., 2001; Douglas and Wildavsky, 1982). For example, participants were asked in this study the question of whether or not they perceived their heart problems to be inherited. The purpose of exploring the notion of heritability was to capture the ways participants were framing their heart attack experiences relative to their broader understandings of heart attack influenced from their social contexts, including family and inter-generational health

histories. For female heart attack sufferers, not seeing themselves as candidates for heart attack in the first instance may be due to the gendered construction of heart disease which can also be compounded for women who may often have less direct social and relational examples of female heart attack sufferers from which to draw conclusions about the condition (Emslie et al., 2001). For seven of the eleven women in this study however, they outlined that close family members had indeed died from heart problems though they tended more readily to cite male relatives as having heart problems.

> **Vivian:** "I lost my father 34 years ago when he was 50 and I lost my brother last year both from heart problems" (female, 54, nma, attender).

For two women in this study, June and Elspeth, despite attributing the 'cause' of their heart attack in the IPQ as high blood pressure and smoking respectively, both made cognitive and causative links between their own heart condition and the belief that they may have inherited the condition,

> **June:** "I think in myself I knew that just with the family history I might hae a heart attack. But I suppose you never think it's gonnae happen tae ye. Ken there's aye that wee bit in the back of your head, eh. But aye, it's in oor genes. It's in oor genes" (female, 50, nmd, non-attender).

> **Elspeth:** "Aye. Because of my family. My uncle Bob, my uncle Bill, my auntie Lizzie, my dad. There was a lot of the family that had it. They had the heart problem and died awfy[29] sudden and my young sister she was 30 when she died. But they had sugar diabetes too which didnae help them much but there was a lot in the family that had this heart problem aye" (female, 73, nmd, non-attender).

For other women, there was uncertainty about whether or not heart problems were inherited, however Ada highlighted that her heart attack possibly could have been,

[29] "awfy" = awful

**Ada:** "Well, that is another thing. Is this something that runs in the family? Because my father died of heart problems. He had two heart attacks and died the second time, which was 47 years ago. So what do you say? Is it family orientated? It could well be. Could well be. I think this ... now they're saying that the genes of people do vary, basically. So that can all be part of it" (female, 66, nma, non-attender).

For other women, such as Lena who had had previous heart attacks, she gave the 'cause' of her recent heart attack on the IPQ as smoking, and as she had been the only one in her family to have experienced heart problems, she articulated her uncertainty about whether heart conditions are inherited,

**Sarah:** "Have any other people in your family had heart problems?"

**Lena:** "Only one. Me. Nobody has had problems."

**Sarah:** "Do you think heart problems are inherited?"

**Lena:** "Well, no, I cannae see it 'cause none of my family has had heart problems" (female, 62, nmd, non-attender).

For men in this study, when asked whether heart problems were inherited, responses varied from absolute certainty that heritability was a factor in their own heart condition, through uncertainty and ambiguity at the degree to which inheritance mattered for their heart condition. Other men denied that inheritance had anything at all to do with their heart condition. For Fergus, Reg and Albert who perceived that their heart attacks were inherited despite giving different 'causes' on the IPQ (stress, smoking and stress respectively), their knowledge of their family's health history provided them with ways to further theorise and interpret the 'cause' of their own heart attack,

**Fergus:** "Aye. My mum and all my uncles had heart attacks but I genuinely didnae associate a heart attack with that side of the family. I was thinking of my dad's side of the family, but ehm, a lot of my family they're all built like

that [shows pinkie, indicating skinny-ness] but I'm the only one that's obese and to be quite honest with ye, I must've taken after my mum's side because my mum's side is all built like that [inflates cheeks to indicate chubbiness]. And my dad's side, they're all built like that [skinny], ken? I couldnae understand how, why it happened tae me. But eh, aye, that's it"
(male, 61, md, non-attender).

**Reg:** "I do, yeah. I think it is inherited. I've seen it on the tele and read about it and I think it's to do with it being passed down through the genes, so I do. I definitely do, aye" (male, 74, nmd, non-attender).

**Albert:** "There will be some genetic thing definitely. Yeah, my mother had angina so I think I was showing signs of that I think. Maybe it was not diagnosed but I think I was, so there is definitely the genetic factor. There could be something there, some pre-disposition towards it yeah"
(male, 54, nma, attender)

Around three-quarters of the male participants were unsure about inherited aspects of heart problems or were not at all convinced that inheritance played a part in their heart attacks. The men who were uncertain about their inheritance showed some doubt, but also gave a sense that inheritance was possible and some of these contradictions were described in the following ways,

**Adam:** "I believe my father, who I have nothing to do with really, I don't know the last time I saw him, but I believe his side of the family had high cholesterol levels and possibly his father as well. The consultant just threw that in as a kind of curve ball to not murder myself on diet as there might be a bit that's hereditary" (male, 44, nma, non-attender).

**Bruce:** "They say there's a connection, but I'm not sure. Well, my grandfather never had a heart problem. My father did. His brother didn't. His other brother, I think may have done. His sister didn't. So, you know some have, some haven't. So, where's the total connection, whether it's genetic. I don't know" (male, 69, md, attender).

**Neil:** "I don't really know, I think there is an awful lot of information in our genes DNA, etc. etc. that we don't understand at the moment and it would not surprise me if you had certain trends, tendencies, towards certain illness because of your genetic make-up. Certainly I know diabetes can be carried on. I'm not actually sure whether heart conditions can be carried on. It's a bit difficult to assess. I don't know is the answer" (male, 69, nmd, non-attender).

**Jude:** "Well no' just heart problems. I suppose there's a lot of medical conditions that could be inherited but could they actually prove it? That's the thing, eh, I mean I dinnae read into they sort of things, so I really dinnae ken exactly what the medics think about they things. But, eh, I suppose if there's a lot of people in a family line die o' similar circumstances there has to be some, something in it for the hereditary question like, ye ken. So, I would say possibly could be" (male, 66, nma, non-attender).

The men who did not believe that heart attacks were inherited indicated a number of different reasons for their scepticism. Medical experts had not confirmed to them it was inherited suggesting a privileging and reliance on this type of expert knowledge to definitively assuage uncertainty regarding the 'cause' of their heart attack. The absence of family members with known heart problems also raised doubts about inherited heart problems,

**Bill:** "No. It has to be your lifestyle. I don't know enough on the subject to comment really. If a heart surgeon said to me that heart attacks are caused because your dad had one, I'd have to believe him eh? But a heart specialist hasn't said that to me so, no" (male, 49, nmd, non-attender).

**Ralph:** "A lot of folk say they are. A lot of folk say they're no'. Me personally, I would say no 'cause none of my family had bother with their hearts. Me personally, me being me, I would say no. No, it's not hereditary"
(male, 56, md, non-attender).

For a minority of the participants (both male and female) inheritance was considered to be a cause of their heart attacks. This perception was influenced in part due to their understanding and knowledge of family members who had suffered from heart problems and participants' inferred links between family inheritance and their own heart attacks. These hypotheses were often contradictory and for the majority of participants, inheriting their heart problem was simultaneously feasible, yet ambiguous, demonstrating that assigning a main cause of their heart attack was often not straightforward. Nevertheless, making sense of the heart attack and attributing 'cause' resulted in the most common 'cause' of participants' heart attacks being attributed to 'lifestyle' factors which were outlined both in the IPQ and further extended in participants' narratives during the interviews.

## Making sense of the experience

*Understanding 'lifestyle'*

Lay understandings of lifestyle risk are often personalised and within this research many participants indicated certain lifestyle behaviours which they believed 'caused' their heart attack. Medical and social representations of individual risk factors which are health damaging are ubiquitous and the majority of participants, both male and female, outlined common behavioural 'causes' such as smoking, poor diet and lack of exercise as likely 'causes' of their heart attack. Bruce, Celia and Philip provided examples of these common responses,

> **Bruce:** "Oh, a bad lifestyle. Too much of everything. Smoking, one of the major causes" (male, 69, md, attender).

> **Celia:** "Smoking and lack of exercise probably. And eating maybe the wrong foods. No' eating enough fruit and veg and stuff like that"
> (female, 57, md, non-attender).

> **Philip:** "Smoking in early life would be one cause. Diet too. I better say alcohol because they blame that on everything nowadays" (male, 66, nma, attender).

These lifestyle factors were frequent responses from participants. For forty seven of the fifty participants, smoking was either a previous or current habit with all the female participants (n=11) current or previous smokers. Three male participants stated that they had never smoked but thirty six of the thirty nine male participants were either current or former smokers. It was more likely for participants to be current smokers if they lived in 'mining deprived' or 'non-mining deprived' areas. French et al., (2005) conducted a study investigating the views of people who had recently sustained a heart attack to understand what they perceived were the causes of their heart attack. Similar to findings in this present study, the participants in French et al's (2005) study described many different factors as causes of the heart attack, for example, family history, smoking, and stress.

In this study, specific 'causes' given on the IPQ were often further augmented with other potential causes or uncertainty about cause during the course of the interviews. For example, some participants were uncertain about what they believed caused their heart attack. These responses were commonly from participants who questioned the validity of whether lifestyle factors such as smoking or poor diet, for example, directly caused their heart attacks. For example, Derek and Walter highlight this point,

> **Derek:** "People say smoking but it wasn't. It was cholesterol. But I couldn't tell you. All I know is what the doctor said in the end. Why was it caused? His exact words were, "I was unlucky." A small blood vessel in the back of the heart closed through cholesterol, tacky blood. Now does smoking cause cholesterol? Does drinking cause cholesterol? Its only diet isn't it that causes cholesterol, as far as I'm concerned. As far as diet was concerned, I like a fish supper as far as anybody, a McDonald's once every 6 weeks or that but I eat a lot of fruit. I'm amazed and can't pin anything down"
> (male, 64, nmd, attender).

> **Walter:** "I've no' got a clue to that one. I've lived the same way all my days for 67 years so you say to yoursel' what caused it? I don't know. There's nae use saying it was this or that or the next thing. I've been eating the same, doing the same sort of thing all my life so it's a question I couldnae answer"
> (male, 67, md, non-attender).

These explanations can create possible tensions between medical and lay concepts of causation (Popay & Williams, 1996). In addition, 'lay epidemiology' (Frankel et al., 1991) can be seen to be at work with participants trying to generate hypotheses about the heart attack including the risks and causes. However, in a small number of cases in this research some of the male participants understood and conceptualised 'cause' to refer to the actual event. Their accounts featured descriptions about the mechanisms of *why* the heart attack had occurred at that particular time and day. Adam outlined this point,

> **Adam:** "I'm very clear on it to be honest and I did some research myself. I had a fag at the usual time I had a fag which was after the breakfast at about 8.10

> which was my routine and from what I read now, and I always want to know why smoking is so bad for you 'cause I don't get the gig at all except they say, it's bad for you, don't do it. So cigarette smoke does 3 things as I understand. It makes your blood more viscous, stickier and it attaches to haemoglobin in the blood and restricts oxygen, carbon monoxide poisoning and thirdly, it can cause ruptures in the cholesterol plates so if you get that kind of mixture – you get a rupture, thicker blood, the heart working harder for oxygen, then you'll probably get a heart attack so I had a heart attack 5 – 10 minutes after I had my morning fag. So the chances are that's what caused me to have a heart attack. I wasn't under any stress. I was pottering about, getting the kids breakfast, wasn't exerting myself particularly" (male, 44, nma, non-attender).

What this suggests is that when some participants were talking about the heart attack, they were not necessarily linking the actual heart attack as a symptom of a chronic condition (Wiles & Kinmouth, 2001). In addition, there was reluctance among some of the participants to fully blame their behaviours for their heart attack. Participant's lifestyle behaviours such as smoking, having a poor diet and doing little exercise, were often couched within the wider context of being stressed, overworked or worrying about their family. Stress was cited as a cause by ten of the participants on the IPQ but during the interviews, stress accounted for 'cause' in myriad ways in just under a third of participant accounts. The sources of stress included work-related stress, family worries, bereavement and depression. The response to stress somewhat differed for men and women. Men often focused on work related stress as causing their heart attack, whereas women commented that their stress was related to overwork and family commitments which often combined to exacerbate their stress. For example, Paul and Fergus outline this,

> **Paul:** "It was quite a stressful period. I think 90% of the [heart] problem was stress. I had to run my own business. I had stepped back and paid a redundancy and then I got thumped with an extra large tax bill. It was just concerning about how I was going to pay it. It was a big stress factor I would say. A large part of it was stress" (male, 62, nma, attender).

> **Fergus:** "I think it was stress. I really do think it was. Even, well, the consultant said it was stress related but I really do think it was stress, 'cause I had an awful lot of emotion after losing my wife and all that was going on with the kids. Stress!" (male, 61, md, non-attender).

For example, Fergus had recently suffered the death of his wife, a significant life-course event and his stress was magnified as he was now solely responsible for taking care of his grown up children and he conveyed that this was challenging and stressful for him. At the time of interview, Fergus was currently off sick due to his heart attack and he was uncertain of his ability to resume work. The loss of his wife and concern over his daughter's health (she had unstable diabetes which had recently resulted in a diabetic coma) resulted in him resuming smoking. He stated that,

> **Fergus:** "I'm gonnae admit it and hold my hands up to it. I did stop smoking and I was getting on great and I even went and got pills from the doctor and they were actually making me bounce off the walls. I stopped taking them and I still never smoked and when my lassie got the diabetes, I went over the shop and got a packet of cigarettes and that's me started again. But, I have to say, I'm going tae have tae get stopped again but I just couldnae take the strain. I just couldnae take the strain, ken" (male, 61, md, non-attender).

For Fergus, his stress and how he coped with it, i.e. resuming smoking were most likely linked to the significant changes which had occurred in his life, including his own heart attack. These, in combination impacted on his sense of self and his sense of identity, and resuming smoking at this time was most likely a comfort to him, despite him being aware of the deleterious health effects of smoking for his heart health.

For females, stress was discussed differently and was most often cited in relation to on-going responsibilities for family commitments and work demands,
Helen and Lena outline this,

> **Helen:** "I think it's more stress that brought it on. I stress mysel' oot.

**Sarah:** In what way? Do you think about things too much and worry about things?

**Helen:** "Yeah. I go over things. I've got to find an answer for everything. I worry aboot the family, I worry aboot [my husband], ye ken. And I think I stressed mysel' totally out for this Christmas, last Christmas I should say. Why? I don't know. Usually I have everything bought and wrapped by the beginning of December. This December I had nothing and I thought hey! And it was 3 weeks of sheer rushing aboot. Have I got this, have I got that. Get the hoose cleaned and clean curtains and I totally stressed mysel' oot, I know it and I think that's what brought it on" (female, 66, md, non-attender).

**Lena:** "I was rushing about like an idiot and working full time and coming home and not stopping. I was working a lot of hours and covering for people on holidays. Looking after my grandchildren at the weekend which was supposed to be days off but I had the children for about 3 weeks I was like that so I think that's what caused it" (female, 62, nmd, non-attender).

For some men, the uncertainty about 'cause' may be linked to the expression of masculinities. Men are said to "be doing gender" (Saltonstall, 1993) by ignoring health until something goes wrong and when something has gone wrong, disembodying the heart attack 'event' from the 'cause'. However, this was also observed in some of the female accounts too, particularly in Lena's case. She was busy with work and caring for her grandchildren but she was suffering from other health conditions (stomach problems) outlined in earlier sections of this chapter. She stated during the interview that she was not eating very well during this time, her smoking had increased and her anxiety levels were very high. What these accounts highlight is that 'cause' of heart attack was often multiple and when participants discussed 'cause' they often couched it within the broader contexts of their life and lifestyle around the time of their heart attack. It can be suggested that 'lifestyle' can mean different things over and above the common pre-conception of the term which implies individual choices and the predilections people make regarding their behavioural choices and preferences related to food, smoking, drinking and exercise. As outlined above and in Chapter 2, these lifestyle 'risk' factors

have been established in medical and epidemiological research as contributory causes for certain diseases, including heart attack. However, lay understandings of lifestyle can be quite different to the formalised and medically legitimate understandings of lifestyle often found in epidemiology or public health (Saltonstall, 1993; Pierret & Radley, 1993; Popay et al., 1998). There were interesting responses when the participants discussed their 'lifestyles.' For example, Vivian, Elspeth, Paul and Samuel, in addition to others in the study, gave a much broader definition of lifestyle,

> **Vivian:** "Lifestyle to me is the way I'm living and I'm happy. As long as I'm happy in my life, my lifestyle, I mean I couldn't care less what people have got, I just want to be fit and well and that's it" (female, 54, nma, attender).

> **Elspeth:** "Your lifestyle is what you dae with your life. Everybody has a lifestyle which is different from one another and that's what makes your lifestyle." (female, 73, nmd, non-attender).

> **Paul:** "Lifestyle means, well professionally the way you live your life. It used to be called class. It's not class any more. It's just the way you live your life. You might want to live in nice surroundings or you might want to live in a hovel, sort of thing. That's my understanding of lifestyle. Also the way you eat, and exercise you take and things like that" (male, 62, nma, attender).

> **Samuel:** "Well, it's what I do in my life. What I achieve and things like that. Well, I want to improve myself. I'm always trying to do something better. Aye, that's about it" (male, 64, nmd, attender).

The understandings of lifestyle outlined by the participants above suggest that lifestyle can encompass more complex and situated life experiences and explanations compared to the often narrowly defined bio-medical and individually focused meaning of 'lifestyle.' It can be suggested that lifestyles for men and women in this research comprised more than simply a collection of positive or negative health related behaviours but rather reflect something more intrinsic about who they are. Returning here to consider Bourdieu's theory of habitus is essential because there is a pivotal link between

participants' lives and where their lives are lived (and what they encompass). Lifestyles are expressed through particular tastes and behaviours which may be predisposed, due in part to social circumstances and social practices embedded in and to participants' habitus. This is important, especially considering participants' heart health and recovery and this will be further elaborated in Chapter 6. What this chapter has so far sought to explore is that the heart attack is constructed by participants often as a shocking and unsettling event which impacts on participants' sense of self and raises awareness of vulnerabilities. Participants attempted to make sense of the heart attack in a variety of different ways and these interpretations included understanding bodily symptoms and sensations of the heart attack, seeking help and responding to the heart attack which may be influenced by representations of heart attack 'candidates' and thus be differentially experienced by men and women. Attributing 'cause' of the heart attack included notions of heritability and lifestyle factors, but often the cause of the heart attack was uncertain and ambiguous for many participants. In this final section, the impact and consequences of the heart attack experience and the effect this had for men's and women's lives will be outlined.

## Impact and consequences of the heart attack

The impact of the heart attack was evident in a variety of ways and had consequences for men's and women's everyday lives and examples of physical, emotional and psychological impacts were articulated by participants. These can have a bearing on participant's recovery and their ability to 'get back to normal' (Tobin, 2000). One of the most obvious effects of the heart attack for participants was changes to their physical capabilities which were outlined earlier. These were particularly acute for some participants because the physical reduction of which they spoke was often detrimental to their sense of self and their everyday lives and raised doubts about if and when they would recover from the heart attack. Physical symptoms after the heart attack commonly included fatigue, chest pain and breathlessness and these in turn had consequences for performing and participating in activities which before the heart attack, were taken for granted.

For example Fergus, Philip, Elspeth and Walter highlighted how the heart attack had impacted on their lives. Their accounts reflected many of the issues other participants raised regarding disruptions to their day to day lives after the heart attack compared to before.

> **Fergus:** "well, I cannae dae the things I want tae dae. Before I had my heart attack I'd say "I'm going to repair the roof", noo, I've got tae think about it. I cannae dae things, even like walking up the stairs. I've got tae think about it noo. Normally, I would've just run up the stairs but noo, I've got tae tak' my time, ken? (male, 61, md, non-attender).

> **Philip:** "the heart attack has affected me because I feel more tired more often now. But I'm getting older too eh, but I don't like slowing down"
> (male, 66, nma, attender).

> **Elspeth:** "I'm awfy[30] tired. Jings! I just feel knackered and I didnae feel I'm having much of a life the noo. I mean, I cannae dae things. I cannae iron at all

[30] 'awfy' = awful

> and that was one of my favourite jobs, believe it or not. Naebody believes that any women enjoys ironing but aye, that was one job I really enjoyed daeing. But noo I've got tae depend on other people daeing it and that hurts me. I've never asked anybody to do anything for me and it's been a big change and it's come on quick. It just went from being able tae dae it, to no' being able tae dae it. It's just devastating!" (female, 73, nmd, non-attender).
>
> **Walter:** "I can't dae what I normally use tae dae. I mean when I used tae walk, I walked fast. I could walk for miles. I used tae walk the dogs and it never bothered me but now I'm feeling a bit, well, haeing tae, ye ken, slow doon a bit" (male, 67, md, non- attender).

The consequences of not being able to take for granted and perform everyday activities with the ease and mastery participants were used to had an influence on their psychological and emotional health. Many participants indicated that they were fearful, anxious and worried. For example, some participants articulated this anxiety in relation to whether or not they would sustain another heart attack and how having a heart attack had made them feel,

> **Laurie:** "It's difficult to believe that because I've had a heart attack I'm not going to have another one. That's what this feeling is like. It's just psychologically horrible. It's scary and overwhelming. I can't describe it. It's like death. It's huge. It is impossible for someone to understand the psychological effect a heart attack has on an individual"
> (male, 59, nma, non-attender).
>
> **Christopher:** "I feel a lot maire[31] vulnerable than I used tae. Up to six months ago, I thought I wis bullet proof and it's no' something ye can stick a plaster on. The psychological side of having a heart attack is worse than having a heart attack. It's the knowing you've had a heart attack"
> (male, 57, nma, attender).

[31] "maire" = more

> **Adam:** "I keep looking at people and asking "why was it me and not you?" Not that I would wish ill on someone but I just can't get my head around that at all. So, I'm a little bitter and twisted and angry in some respects. I've gone through the whole [emotional] range. You name it. I've been a bit down about things" (male, 44, nma, non-attender).

For some participants, the heart attack had provoked emotions which were unfamiliar to them and it was possible that some of the participants were experiencing mood disorders. The psychological and emotional changes Winston, Alison and Elspeth highlighted were shared by other participants who mentioned changes in their mood, appetite and sleeping patterns.

> **Winston:** "The first few weeks [after coming home] I was great. I was wanting to go oot and dae things and was feeling great. But all of a sudden I just felt that bit low. I don't know what brought it on and I was up and down. I've been up and down like a yo-yo since then and I dinnae ken what to make of it, just like there was a cloud at times (male, 67, nma, non-attender)

> **Alison:** "I've actually been very weepy. It doesn't take much and I get very frustrated with my husband because he's not very supportive and every now and again I totally blow a fuse, but yeah, I get weepy and angry about my situation and the way it is (female, 64, nmd, attender)

> **Elspeth:** "I'm no' really eating an awfy lot just noo and I've lost quite a bit of weight but I think it's because of how I'm feeling. I dinnae want tae cook as I'm finding it difficult. I just cannae be bothered"
> (female, 73, nmd, non-attender).

For other participants, they articulated feelings of panic which sometimes resulted in anxiety and panic attacks,

> **Jason:** "Oh since my heart attack I've had nothing but anxiety attacks ever since. Every day. Anything sets me off, whooomph! That's it. You want to have seen the state of me this morning. I couldnae breathe or anything wi'

> the pain in my chest. Before if I was anxious I'd have had a smoke but I've no' got that option anymore so I think that's hitting me hard too
> (male, 48, nmd, attender).

> **Maureen:** "I've been through a lot since the heart attack and when I came out [of hospital], I was taking panic attacks and sometimes I get them now and again. Last week I had the doctor in and I took a wee turn with breathlessness and fainting and she thought it was more panic. She said that I panicked and brought it on (female, 68, md, attender).

For the majority of participants emotional and psychological reactions after the heart attack were commonplace, at least to some extent. This combination of physical, psychological and emotional consequences of a heart attack can be seen to disrupt participants' identities which include taken for granted activities, duties, responsibilities and relationships, resulting in increased feelings of worry, apprehension and uncertainty which can have consequences for how well participants cope and adapt to their changed circumstances. As stated at the beginning of this chapter, a heart attack can disrupt one's sense of self and potentially lead to exclusion, loss of freedom and participation in one's normal taken for granted life (Merleau-Ponty, 1996; Gadamer et al., 1996; Toombs, 1993). For example, Keith and Ray highlighted how the heart attack had affected them in this regard,

> **Keith:** "I think about everything noo. Everything I do. It's fear eh? From the minute I get up in the morning I'm thinking about it. I've got to take my pills, do this. Do that. There's not a minute of the day when I don't think about what's happened. We're discussing something that we're going to be doing in work over the next few weeks and it involves a bit of lifting. I'm going tae dae it but I'm a bit apprehensive (male, 47, md, non-attender).

> **Ray:** "I'm no' as cocky and big headed. It's getting better all the time but when I first went back to work my confidence wasnae good at all. I thought I was a write-off. I thought I was finished. Will I get back tae work? I had panic attacks, the lot! Maybe it was the fright and then everybody was saying it's a wake-up call. But it was a shock, eh? (male, 60, md, attender).

For some participants, expressing and articulating the weaknesses and vulnerabilities that the heart attack produced can be interpreted as a blow to gender identities (Keaton and Pierce, 2000) The constraints and losses which many participants felt in the aftermath of their heart attack were interconnected to the wider contexts of their lives and these were differently expressed for men and women, particularly regarding the roles participants strongly identified with. For example, for some men in this research, masculine identities were often tied up with public work and earning and being capable of working is often associated with male gendered roles (McDowell and Sharp, 1999). For example, descriptions of employment categories gathered from participant's demographic information are shown in Appendix 14 which provides descriptions of job classifications and the number of participants who were employed in each category. Of the fifty participants, 26 were currently retired. For the remaining participants, fourteen were in work, with the remaining ten either out of work, off sick or permanently sick. For example, 22 males were previously or currently employed in jobs classified as skilled trades and/or other manual professions. Indeed, these types of jobs tend to be physically demanding and for certain types of workers constructions and norms of masculinity linked to health will potentially differ from those from managerial, professional or technical occupations, for example. Fifteen male participants classified themselves as managerial/professional. Linking physical ability, health and employment constituted a key aspect for many of the men in this research. For example, Fergus and Ralph, both self-employed painter and decorators (but currently off work after the heart attack) outlined how the heart attack experience had impacted them,

> **Fergus:** "well, I cannae dae things that I could dae before my heart attack. I love ma work and I'm a specialist in hanging paper and I used tae sometimes work seven days a week. I dae miss it, but by the same token, I cannae go and dae it! I cannae go up a ladder as I find if I'm daeing anything, any exertion work, I'm starting tae toil. And I think it's in there (points to his head) but my body is worn oot, ye ken. But I need tae go tae Edinburgh where they put a tube in there and it goes up to yir heart to see if the valve's open so once, if I get past that, I want tae get signed off the insurance because I've got nae time for sitting in the hoose" (male, 61, md, non-attender).

> **Ralph:** "I'm concerned if it comes again or I take another one. If I can no longer get back to my work. If it's going to stop me getting back to my work, I dinnae ken. I dinnae ken at the moment. I went to the doctors yesterday but I dinnae ken if I am getting back tae work, or if I'm fit enough. Am I getting back tae work? I dinnae ken" (male, 56, md, non-attender).

For Fergus and Ralph, there was uncertainty about whether or not they would able to resume working and at the time of interview, they articulated frustration about their circumstances but also questioned whether they were necessarily able to work. For Adam who was a senior manager and other participants who were employed in similar types of professions, stress and demands of the job were discussed and included long commutes, temporary and uncertain working contracts in some cases and management duties which were cited as contributory factors for stress. Adam articulated that his job stress had likely contributed to his heart attack and the impact of this meant that certain alterations to his working life and lifestyle would require immediate attention,

> **Adam:** "I worked really long hours and looked and felt tired all the time. I think the hours and the pressure I was under at work had a lot to play in it. My employers have felt guilty and they've backed off and I kind of resent that but I met them last week and said that I needed to make some changes and I couldn't keep charging about the whole country. I just can't do it. I mean before, I didn't get a lot of spare time. I spent a lot of time in a car and when you do that it's easy to rely on cheeseburgers and things and exercise can be difficult (male, 44, nma, non-attender).

For some of the women in this study, the impact the heart attack had for their identity was highlighted by Elspeth. She perceived her heart attack (in addition to her other health conditions) as affecting her ability to undertake day to day activities which undermined her independence. Despite independence often being considered to be a more 'masculine' characteristic it was abundantly evident within women's accounts of their day to day lives and being independent and strong was a part of their identity. Elspeth, Ada and Carol for example, were widows and they had adapted to cope with life without their husbands. For example, Carol had been widowed for nearly 40 years and spoke of her

husband who had been killed in a coal mining disaster in the Wellesley mine in 1973. They had three young daughters and Carol had no choice but to 'get on with things.' For her, Elspeth and Ada, being independent and stoical were necessary characteristics to cope with their altered domestic circumstances perhaps in different ways to the other women in this study who were currently married. Nonetheless, all women in this research talked about how the heart attack had affected them in different ways particularly their sense of self and on their normal 'care-giving' and domestic duties which also characterised part of their identities. Women also talked about how they perceived their heart attack had affected other family members. This was a source of frustration in some cases, especially for Elspeth who earlier in this section indicated that she was finding cooking for herself difficult because she was generally felt like she could not "be bothered". However, it became clear that cooking for herself and cooking for other family members, were not one and the same,

> **Elspeth:** "I'm finding it difficult to peel potatoes and things like that. I cannae open jars or bottles 'cause I've got arthritis in my thumbs so I cannae grip at all. But at the weekend my grandson stays wi' me and I love it. I love daeing it [cooking] 'cause he's coming so I'll make something special for him and my son. They come every Friday for their dinner as it's always been for 15 years. I arrange what I'm going to have and I get up on a Thursday morning and think aboot it. I make everything from scratch" (female, 73, nmd, non- attender).

For Carol also, her independence in day to day tasks and activities which she had come to take for granted were compromised after her heart attack and although her family were close by and could offer assistance if needed, she preferred to do tasks, if she could, by herself,

> **Carol:** "I still do most of my own housework but like my family says they'll come and do something for me, ye ken, but I've always been independent and I dinnae want to lose my independence so it just takes me longer to get the housework done. Like say when it comes to takin' curtains doon and that. I have tae get them tae come and tak' them doon and put them back up for me. Things like that" (female, 75, md, attender).

For some of the women in this research, similar to White et al's (2007) study, they often provided support to family members to counteract their anxiety and they attempted to maintain their independence by resuming domestic tasks despite their ill health.

Some men articulated that they were aware of alterations in their gendered role within the context of family life. Due to the serious and threatening nature of a heart attack and often the reductions in physical capabilities in the period after the heart attack, some men perceived that they were under surveillance by wives and partners. A number of men reported that they werenae allowed tae dae things' and that the increased vigilance and attention was overwhelming. For example, Winston stated that this had annoyed him and for Derek, this vigilance made him feel over-protected and compromised his independence,

> **Winston:** "what annoys me maire than anything was everybody watching me and telling me 'do this, don't do this' and that had maire effect on me than anything else, ye know? I mean I'm sitting ha'ing a plate o' soup and they're watching the spoon because it might be too heavy for me! Oh gee whizz! For the first few months, it was terrible" (male, 67, nma, non-attender).

> **Derek:** "I find people have been too protective. I go for a walk and she [wife] says, 'you can't walk!' I've got nieces who are nurses and they're telling me what to do. It's too protective" (male, 64, nmd, attender).

For other men, their masculinity was threatened by not being 'allowed' to do certain tasks which they normally would. Previous research conducted by Smith et al., (2007) and Johnson and Morse (1990) has highlighted that men can feel their masculinity is being threatened when wives or partners take over traditional 'male' roles. This point was emphasised by Ralph who stated that,

> **Ralph:** "If we go shopping, I dinnae get tae carry the messages.[32] She's got tae carry the messages. She keeps wrapping me in cotton wool. She doesnae

[32] "messages" = shopping/groceries

> let me dae too much. She'll let me walk but only so far and she'll let me carry wee bags, but no' heavy ones" (male, 56, md, non-attender).

For participants the impact their heart attack experiences had on their lives were myriad and diverse. However, participants talked about certain losses and restrictions which had occurred in the wake of the heart attack. For example, taken for granted activities, responsibilities and relationships were impacted in different ways for men and women. The recognition of the changes to their physical, emotional and psychological well-being was often compounded by anxiety and apprehension about whether or not things would return to normal. For both men and women, the consequences of these changes impacted in varying degrees on their sense of self (identity). Participants also reflected that the heart attack had impacted on different aspects of their lives such as work, domestic responsibilities and personal relationships.

## Conclusion

This chapter has explored a number of different but inter-connected themes related to men's and women's experiences of heart attack. It was highlighted that a heart attack is often a shocking and disruptive event which can elicit powerful reactions and affect an individual's sense of security. The surprising nature of a serious condition, such as a heart attack, can "assault the body and threaten the integrity of the self" (Charmaz, 1995:657). This can have consequences for how men and women attempt to make sense of what has occurred. Making sense of the experiences includes understanding signs and symptoms and attributing and constructing 'cause' of the heart attack. The gender construction of heart attack 'candidates' often considered 'male' may be seen to influence how men and women respond (understanding symptoms and seeking help, for example) to the heart attack. In this research, both men and women demonstrated uncertainty about signs and symptoms for heart attack. Understandings about what caused it were discussed widely and included many uncertainties and contradictions. Utilising different methods (IPQ and open ended qualitative questions) to discuss cause, it was clear that participants differed in their responses about attributing cause. It was shown that 'cause' was often multiple and when participants discussed this it was often connected to different aspects of their life and lifestyle around the time of their heart attack. Lifestyle factors such as smoking, unhealthy diets and stress were outlined and differences were shown in how participants constructed the extent to which their lifestyles had 'caused' their heart attacks. Nevertheless, the concept of 'lifestyle' was much broader than that which health professionals use and in this study it encompassed a more holistic understanding of their lives and the 'lifestyles' men and women have.

The interconnectedness of understanding cause and relating this to other aspects of life were articulated in relation to the impact and consequences of the heart attack. The disruption which participants outlined had occurred in their day to day lives since the heart attack included physical, emotional and psychological issues. These affected participants' identities in a variety of different ways including how they responded to taken for granted activities, duties, responsibilities and relationships post heart attack and

feelings of worry, apprehension and uncertainty about whether their lives would get back to normal were common. What this chapter has shown is that for both men and women, the heart attack is the common link but men's and women's experiences and responses to it are not homogenous. Exploring in greater detail gender issues and perspectives regarding their heart attack is necessary to capture the complexities of men's and women's experiences (Johannson et al., 2003) but also to recount how gender interacts with other determinants (age and social position) which can impact on how the heart attack is experienced and responded to. Gender constructions of health and ill health are influenced in and through specific types of domains and specific contexts can be important for influencing beliefs, attitudes and behaviours towards heart attack and recovery. Social practices and corresponding beliefs, behaviours and attitudes to health are influenced not only by social and medical constructions of health but also locally constructed gendered roles which 'impose' certain gendered norms (Massey, 1994). By paying attention to men's and women's constructions of heart attack experiences and conveying the impact and consequences the heart attack has for their lives, this thesis is attempting to embed these experiences in and to the contexts of participants' lives.

The next chapter will explore participants' experiences of recovery from heart attack and will draw on themes presented in Chapter 4 and Chapter 5. In order to explore men's and women's experiences of recovery, attention will return to the social and geographical settings in Fife where their lives are situated. In addition, recovery from heart attack will take a specific NHS Fife cardiac rehabilitation focus and in particular barriers to engagement which are differentially experienced by participants, will be considered.

# Chapter 6: Recovery in place

## Introduction

It has been shown in previous chapters that the heart attack is an often shocking and disruptive experience, generating uncertainties about the body and the self and impacting on various aspects of men's and women's lives. Recovering from a heart attack is important to understand in greater detail because the lived and on-going experience of recovery is often unknown and to date is an under-researched area (Tod, 2008). How participants view their recuperation and evaluate their health experiences post heart attack is important and in the previous chapter, some of the impacts and consequences of the heart attack were outlined by men and women. 'Getting back to normal' was often stated by participants in this research as a focus and their desire to achieve this outlined the extent to which the heart attack had disrupted many aspects of participants' day to day lives. Experiences of recovery, like those of heart attacks, are influenced by a variety of factors (including gender, age and social position) which are couched within participants' wider social contexts. Previous chapters have described why place is important and outlined specific characteristics of different places in Fife which are a) important for understanding geographies of health, b) important for understanding how social constructions of health and ill health are produced, reproduced and relationally experienced by people in place and c) how these places may influence and shape health experiences, including lifestyles and behaviours. This last point will be further explored in this chapter as a way to further situate people to and within their wider social contexts.

In this chapter, the health intervention of cardiac rehabilitation [CR] is used to highlight the complex and contradictory nature of participants' recovery post heart attack. Cardiac rehabilitation has been outlined in Chapter 2 but to briefly recap, it is a four stage model which includes exercise, education (often focusing on lifestyle modification) and relaxation components (Jones et al., 2009). This chapter will explore in further detail participants' responses to their recovery and in particular highlight barriers to engagement with cardiac rehabilitation which are complex and multiple but which are often poorly understood. This is because understanding the perspectives of those who

have not engaged with cardiac rehabilitation has often been neglected in research (Jackson et al., 2012). This study sampled men and women who were attending cardiac rehabilitation, as well as those who were not, from different social locations across Fife. Acknowledging that heart attack experiences and recovery vary and are socially and contextually produced can result in better understanding of localised variations for CR engagement. This is important so that organisational responses can be better focused in future. This is particularly important because under-represented groups (those from areas of social deprivation, older people and women) have been identified in local, national and international CR evidence as being most likely to not attend (NHS Fife cardiac rehabilitation report, 2011; Jackson et al., 2012; Jackson, 2009; Rees et al., 2005; BHF, 2008; Wyer et al., 2001; Melville et al., 1999). However, reasons for non-engagement are often focused on individual factors for explaining lack of engagement and the lived experience of heart attack and recovery (in place) and how these inter-relate with CR in particular, is often not reflected in research (Jackson et al., 2012; Tod, 2008; Galdas et al., 2010). Therefore, situating recovery and engagement with CR within and to participants' everyday lives in Fife will be explored in this chapter.

This chapter will be structured in the following way. Understanding differences in participants' 'lifestyles' in place post heart attack is necessary because in chapter 5 participants outlined that 'lifestyles' were often perceived as more than just a collection of behaviours and predilections and that the heart attack experience had altered their lives and their lifestyles in myriad ways. Understanding how participants' lifestyles are produced, constructed and embodied is important because part of the recovery process (and certainly that promoted by CR) is often to alter and modify lifestyles through behavioural change which is one of the corner-stones of cardiac rehabilitation. Evidence of the effectiveness of cardiac rehabilitation is constructed in part, vís a vís the reduction in classic risk behaviours which can contribute to heart attacks. The individually focused conceptualisation of cardiac rehabilitation often reinforces a behavioural model of health which views behaviours as entirely a matter of personal choice. This chapter will highlight that greater appreciation is required of the ways health and ill health (including lifestyles) are produced and reproduced in place and how these (in conjunction with gendered experiences of heart attack and recovery) may impact on and create differential barriers

to engagement with cardiac rehabilitation. Barriers to engagement with cardiac rehabilitation which participants identified during this study will be highlighted in the latter part of this chapter and include institutional and organisational barriers, knowledge and understanding about cardiac rehabilitation and situated and gendered recovery experiences, amongst others. Additional findings related to these issues garnered from cardiac rehabilitation staff interviews will be presented in chapter 7.

## Recovery in place: comparing 'deprived' and 'affluent' places

It has been shown in previous chapters that place can be understood in a variety of different ways. What this thesis has so far sought to highlight is that place is complex and influences health and well-being in a variety of ways for different people –how participants identify, act and gain meaning in and through their social contexts which can in turn affect health and ill health experiences. To understand how places in Fife influence participants' lives (including lifestyles) information was presented in Chapter 4 related to participants being asked to describe their area and outline if they thought their area was distinctive from other places in Fife. The aim of this was to highlight the nature and characteristics of place which are unique to local areas (Massey, 1994; Jones & Moon, 1993). Subsequently, participants were then asked a number of questions about their area and whether they perceived it was 'healthy' or 'unhealthy' compared to other areas in Fife. These questions were constructed to gain insight from participants about whether health and ill health are viewed differently depending on social context. Participants' understandings of place in Fife and whether or not they viewed their and others' neighbourhoods as 'healthy' or 'unhealthy' included details about place characteristics. The purpose of asking participants these questions was to explore and identify the ways place can be perceived to influence and impact health both negatively and positively. Firstly, areas which have not been blighted by de-industrialisation were most often described by participants as having health benefits with perceptions being that these areas possessed more favourable attributes, including physical, social and cultural features which would benefit health. Often such areas were described as 'affluent' and these locations in Fife were named consistently as St Andrews, Cupar and villages in the East Neuk. Adam and Christopher illuminated examples of these areas,

**Adam:** "if you want the profile in terms of health you can look to Anstruther, Elie and places like that. It has an elderly population, people are retired. They seem to be fit and healthy and well and active. It has nice surroundings compared to the more urban conurbations, your Levens, your Kirkcaldys, Glenrothes. They're not the same. I would say that health tends to go with affluence to a degree. People can afford to buy better quality, they're better informed, can make better choices. Contrast that with living in Lochgelly and place like that where it seems people live out of, to a greater extent, chip shops, take-aways, pubs. They smoke more and drink more"
(male, 44, nma, non-attender).

**Christopher:** "I reckon there are pretty healthy bits of [Fife] if you go along Limekilns and up to St Andrews, Wormit and roond aboot those places where it seems a different life. You've no' huge industrial estates or anything. There are bits of Fife that are quite well to do places, like Lundin Links and Largo. People seem to have decent enough jobs and nice hooses and probably look efter themsels'[33] a lot better. But that's just my impression. That's no' a fact"
(male, 57, nma, attender).

By contrast, when participants were asked which areas were 'unhealthy' those characterised as being more de-industrialised (e.g. 'mining deprived' or 'non-mining deprived') and thus, more 'unhealthy', were highlighted and the examples given often 'mapped' onto de-industrialised areas in Fife. Many 'declined' places are classified as 'deprived' or imagined as 'unhealthy' places (Clark, 2003) and these perceptions can become embodied by people resident in these areas and viewed in particular ways by those from outside. A number of participants articulated the consequences of decline and the lack of opportunities available and provided examples of social problems such as crime, anti-social behaviour (including alcohol and drug abuse) and gangs which were evident in their areas. All of these examples suggested that certain characteristics of these places may not be health promoting, but potentially health damaging. For those

[33] "efter themsels'" = after themselves

recovering from a heart attack, these 'unhealthy' characteristics of place are unlikely to provide optimum conditions for improved well-being and good psychological health. Jason, Greg and June provide examples of some of these issues,

> **Jason:** "It's a shithole. Ask anybody. I dinnae like Glenrothes. It's no' a nice place tae stay anymore. We've got a wee shop at the corner there, eh and the gangs are there, the teenagers are there and they come from miles around tae get their drink oot it. So it's quite hectic here and it's worse in the summer. There's a beautiful town park but it's full of arsehole alkies[34] and ye cannae go down. The town centre over there on Fridays and Saturdays is a no go area 'cause there's fighting all the time" (male, 48, nmd, attender).

> **Greg:** "There's too many junkies at the moment, too many nutters aboot, but that's it. Just kind of dragging the place down" (male, 48, md, attender).

> **June:** "Well there's a lot of places in this toon that dinnae get a very good reputation. And there's a lot of places that look a bit dirty, ye ken and I ken there's a lot of the places where they're no' exactly awfy great"
> (female, 50, nmd, non-attender).

Individuals who lived in areas socially constructed and represented as 'unhealthy' or 'deprived' can become victims of stigmatisation because it may be assumed that living in those areas is evidence of a lack of awareness (at best) or a sort of "moral malaise" (at worst) (Wakefield and McMullan, 2005: 301). For participants resident in areas which have been affected by de-industrialisation, such places can, over time, begin to develop "positive or negative reputations" (Gesler in Kearns & Gesler eds. 1998: 17). This can have consequences in various ways for those living within those areas. However, as stated in Chapter 4, despite negative reputations, participants from these areas often talked positively about their neighbourhood and provided examples of social support and peace and quiet, for example, suggesting that constructions and perceptions of place are complex.

[34] "alkies" = alcoholics

There was evidence articulated by some participants that health and ill health can be produced, constructed and enacted differently across 'healthy and affluent' versus 'unhealthy and deprived' areas. Laura, Bill, Celia and Derek highlighted certain markers which they perceived contributed to an area's reputation for 'unhealthiness'

> **Laura**: "I would say this area is unhealthy. There's no' many healthy folk aboot here. Well, I would say unhealthy. What's healthy aboot it? No, I would say unhealthy. What is there to take up your mind with? There's no' really nothing. I think it makes folk sluggish. Well, it makes me sluggish anyway"
> (female, 58, md, non-attender).

> **Bill**: "If I believed what I read in the papers I know that poor areas are where unhealthy people come fae. I wouldnae call this a poor area. There're people unemployed but no' massively so but if you go over the hill you see a slum, in my opinion. We walked up one day and we went off our usual route and there was a block of flats and at the bottom of the flats there were mattresses and all drug needles and things like that"
> (male, 49, nmd, non-attender).

> **Celia:** "There's quite a lot of folk who've got illnesses round about here, aye"
> (female, 57, md, non-attender).

> **Derek:** "In my honest opinion an awful lot of people are getting fat. I know I've put on weight but I know I'll get rid of that in the next couple of months. But when you actually walk round there's an awful lot of obese people. I don't know why" (male, 64, nmd, attender)

From these quotes above it can be seen that there may be certain markers contributing to participants perceptions of 'unhealthy' places and (although assumed) 'unhealthy' people therein. Gesler, in Kearns and Gesler eds. (1998:17) has pointed out that places achieve reputations because "people perceive that they do or do not fulfil basic needs such as providing security, a feeling of identity, material wants or aesthetic pleasure." Embodied experiences of health and ill health are influenced by many factors and areas provide the opportunities or constraints (physical, psychological and emotional) for

health and wellbeing. The social meanings and constructions of places as 'declined' and 'unhealthy' or 'thriving' and 'affluent' can in turn, it is argued, provide the conditions for the creation and maintenance of health and ill health and in turn, influence the experiences of participants in their recovery responses.

## Situating 'lifestyles' in socially contrasting places

It has been presented in Chapter 5 that the heart attack had impacted on different aspects of participants' lives in numerous ways and this section is concerned with the ways 'lifestyles' are produced, constructed and embodied by participants within and through their social locations. It was presented in Chapter 5 that the impact of a heart attack had a number of different consequences for participants' physical, emotional and psychological well-being which raised uncertainties about 'getting back to normal.' As cardiac rehabilitation stresses changes to participant's lives through individual behaviour modification, understanding the situated nature of lifestyles can provide a greater awareness of why people might behave the way they do and how this may affect their recovery and influence engagement with CR.

Blaxter (1990: 5) suggested that lifestyle "is a vague term" and like attitudes and behaviours, is complex. Lifestyles have diverse and variable meanings for participants, as highlighted in Chapter 5. To better understand the characteristics of how place influences the way lives are lived is important because these can provide clues about how "structures work themselves through into the dynamics of everyday life" (Popay et al., 1998: 635). To recap, Bourdieu stated that while individuals choose their behaviours, they are often predisposed by their *habitus* towards certain choices and these choices are characterised by the social practices bound up in their own social environments and social position (Frohlich et al., 2001). Bourdieu explained that different social groups have different 'cultural consumptions' or tastes. Tastes are developed through availability of resources and lifestyles are 'chosen' which fit social positions and are, in turn, accorded different social and symbolic value in society (Williams, 1995). Examples were often given related to behaviour, beliefs and attitudes related to a wide variety of 'lifestyle' factors. Participants articulated awareness of and gave examples of what they perceived to be

contextualised local cultures with associated 'tastes' and behaviours being linked. By way of interpretation, Bruce and Ray outlined this notion of lifestyle reproduction in the following ways,

> **Bruce:** "In certain areas eating habits are probably the same. You know, you're brought up with something as a child, you're going to carry on and then you're going to have children, they're going to follow you. It's copycat syndrome. You know 'we used to have this on a Friday' or 'that for a Sunday lunch.' That carries on and you do the same thing. And if you always live in the same locality where you were born and bred and you're not moving out of it you're just going to carry on what your parents did, 'cause your parents will do the same as your auntie and uncles are doing. So you stay in that same routine, same rut if you like" (male, 69, md, attender).

> **Ray:** "I mean Scotland the capital of the world for bad heart attacks. I mean you read about the Mediterranean diet and they live an extra 20 years oot there 'cause of their nice olive oil and their nice lifestyle. But Scotland's the worst place in the world for lifestyle isn't it? If the statistics are to be believed I've got tae say aye. Look at what we were brought up with. Fish and chips and saturated fat, steak pies. It's just a lump of lard on top of the steak pie isn't it and we eat all that. Steak bakes and bridies[35] every day. That's the food ye were brought up with" (male, 60, md, attender).

References were made to different types of lifestyles in some places compared to others. The situated nature of, and influence of the habitus for health, well-being and recovery from heart attack is imperative to acknowledge and some participants talked about this. Adam, Jude and Joe articulated this in the following ways,

> **Adam:** "Where I grew up it was a mining town and in the mining villages everybody smoked, drank and that was it. There wasn't a lot of health education. It was the culture. When I was young, guys were paid their wages in their pay packet and they went straight to the pub. The pubs were booming. People thought nothing of it and similarly smoking was much more

[35] Bridies = a Bridie is a Scottish savoury meat pastry that originates from Forfar, Angus.

prevalent and accepted. Call it a working class thing. If people have less money available, your leisure life is probably lesser so. Someone with money might collect classic cars but the guy that's close to the minimum wage, a few pints and the darts team is how he enjoys himself. The limitations are there before him. To a great degree, you're a product of the environment you're in" (male, 44, nma, non-attender).

**Jude:** "well you see Leslie's in a part of Fife which was classed as maire industrious, whereas, ye gang[36] to the North East of Fife and they're maire "la di da," ken? I'm no' being critical of you like, ye ken, but it's just part and parcel cause the north of Fife is maire agricultural. There's very little heavy industry. Ken, you've got a line sort of across Fife, sort of Leslie, Glenrothes and south and that's the industrial part of Fife. I mean, the majority of people in the north of Fife are likes o' farmers and landowners and that sort of thing, ken?" (male, 66, nma, non-attender).

**Joe:** "the mining areas will be different I suppose. I did a lot of work in Methil and Buckie and those sorts o' places and they were a' miners or ex miners and I would say tended to hae different lifestyles to what I had coming fae the country. We were maire country folk and they were maire greyhounds and pubs and things like that. They needed their social clubs and their beers and things like that whereas we didnae bother so much in the country. I wouldnae hae liked the style of life they had. It was just different"
(male, 74, nmd, non-attender).

The above extracts show that participants were aware that there was an interactive relationship between places and people and 'individual' lifestyles and ways of living are often passed on from generation to generation in the form of ideas, norms, habits, customs and cultural tastes and preferences (Bourdieu, 1984). The creation and production of lifestyles varies between particular places and can also be structured by gender and age which are important determinants to consider. Elements of lifestyle observed through behaviours can mask underlying social pressures and vulnerabilities

[36] "gang" = go

which can differ depending on the social context. Reiterating Phillimore (1993: 176), "the characteristics of places may be as important as the characteristics of people for an understanding of particular patterns of health." It has already been shown in the previous chapter how men and women constructed their experiences of heart attack. The disruption to the self and making sense of the shocking and disruptive experience of heart attack was commonly expressed. Identities which are produced in and through places, whether that be in 'mining deprived', 'non-mining deprived' and 'non-mining affluent' areas in Fife will reflect differences (albeit subtle and nuanced) related to social practices, influenced by structural and contextual factors, particular to participants' habitus.

Tod et al., (2001; 2002) for example showed that those from working class backgrounds may anticipate ill health and display lower expectations of health within the context of their lives which can impact negatively on engagement with health services. Within this research, there was a tendency for participants from deprived areas ('mining deprived' and 'non-mining deprived') to be less sanguine about their health and during the interviews they often made reference to anticipating poorer health. Keith, Isaac and June illustrated this point,

> **Keith:** "I knew it [heart attack] was going tae happen sometime. Although it was a shock at the time, I wasn't surprised you understand. Because of the family history. I kent it was going tae happen at some point. My dad was 43 when he had his. When I got tae my 43rd birthday, I'm like 'beat ye!' When I got tae my 44th birthday - 'beat him another year, beat him another year.' I thought I'd get tae 50. I thought I'd get tae 50 but I didnae. I call this my little gift from beyond the grave from my father." (male, 47, md, non-attender)

> **Isaac:** "I thought I'd hae cancer quicker, you know with the smoking because I was getting breathless and stuff and I'd seen the doctor about that before I'd had the heart attack and he tried to get me on tablets to stop smoking and stuff but it didnae really work at the time. But I think the heart attack gave me a fright and I got the patches this time and I've done no' too bad on the patches. It is hard" (male, 56, nmd, non-attender).

> **June:** "But what I thought was gonnae get me was I thought I was gonnae be like my mum. It was cancer. It was breast cancer for her. And I keep getting lumps underneath there and I'm up at the doctors. I've got another lump. I've got another lump. I'm paranoid about lumps. That was maire in the forefront than the heart, eh [laughs]" (female, 50 nmd, non-attender).

Previous research has suggested that people in more disadvantaged positions may lack a positive concept of health, expect poorer health and feel they have little control over it. This may result in less inclination to take preventive action (Hunt et al., 2000; Backett & Davison, 1995; Davison et al., 1992; Davison et al., 1989). Denial and fear can also result in participants coping with their symptoms and managing their conditions themselves (Tod et al., 2001; 2002). These barriers can reflect an inverse correlation with those most in need being the least likely to seek help or attend CR. By contrast, those from more affluent areas ('non-mining affluent' areas) seemed to have greater health expectations in general which may in turn contribute to better overall health and higher levels of engagement with health services. Certainly among male and female participants from 'non-mining affluent' areas, the shocking nature of having a heart attack was met with disbelief as few thought they were at risk from a heart attack, partly influenced by gendered constructions of heart attack candidacy, but also due to their perception that they were mindful of taking care of their health and adopting and embodying a 'healthy' lifestyle which they presumed ought to have been protective. Jack and Alistair reflected this,

> **Jack:** "I did always lead a very healthy lifestyle. I ate an exemplary diet. I wasn't overweight at all. I used to go swimming a couple of times a week. I would leave the office where I worked and go to the gym at lunch time, 2 or 3 times a week. Partly to get away from the phones and blighters asking me questions! All this came as a complete surprise to me"
> (male, 66, nma, attender).

> **Alistair:** "I'm totally perplexed about it [heart attack]. I don't know. Cause if I hadn't been sort of careful in my diet, exercised, all my life done exercise. I can't give you an answer cause I don't know. I'm totally perplexed about that"
> (male, 81, nma, attender)

These differences in lifestyles and behaviours when comparing those from different social contexts demonstrated that there was the perception that different characteristics and distinctions were being made about people from different places in Fife, some subtle while others more obvious. Therefore, the production of gender and the production of particular lifestyles may be influenced by local histories and cultures (Massey, 1994; McDowell and Sharpe, 1999) and the social relations and practices demonstrated in particular populations can affect health negatively or positively. Therefore, social practices and behaviours are highly contingent on social environments which are then demonstrated by different social groups (and individuals) through beliefs, attitudes and behaviours. Places (and people) are complex with social, political, economic and cultural processes being important for constructing and reproducing health (Macintyre et al., 2002). Therefore, the areas where participants in this research were located and where their lives were lived have produced and shaped distinct geographies of heart attack experience and recovery.

For those recovering from a serious heart condition their lifestyles (articulated by participants as being more than their behaviours) reflected who they were and what they did and were part of their identity. Changes to lifestyles which are encouraged after a heart attack, may well reduce the risk of further heart attacks, but for some participants, knowing that certain aspects of their lifestyles have to alter and which are fundamentally embedded in and through place, may further impact on their already disrupted sense of identity. For example, reducing or stopping smoking or drinking was reported to impact on some participants' social relationships and curtail social support, particularly as these often took place in the pub. Changing dietary habits and making different choices were also stated and for some participants this raised financial dilemmas about affordability of 'new' foods. In addition, skills required in cooking and/or food preparation and planning were not necessarily the speciality of a number of men in this research but they realised that they had to improve. Therefore, making these changes impacts on a number of other aspects of participants' lives. The chapter thus far has further explored the importance of participants' wider social contexts and how these places can influence and shape health experiences, including lifestyles and behaviours. The next part of the chapter will explore recovery from a distinctly cardiac rehabilitation perspective.

## Responses to recovery: cardiac rehabilitation in Fife

The model of cardiac rehabilitation used in Fife aligns with the recognised four phased model outlined in Chapter 2 which includes a focus on augmenting 'individualised' behaviours, which is undoubtedly helpful at reducing the risk of heart attacks and encouraging participants to make lifestyle changes, but less consideration is given to wider contextual or structural factors known to influence and impact on lifestyles and engagement of populations in situ. This is despite NHS Fife recognition that attendance continues to reduce throughout the four phases (Appendix 15).

In this study twenty two participants (18 males and 4 females) attended cardiac rehabilitation (Phase 3) and twenty eight participants (21 males and 7 females) did not attend this Phase (see table 2 in chapter 3). Much of the evidence to date for why patients do not engage or attend rehabilitation has sought to identify individual factors, particularly psychological factors for lack of engagement. The logic of this is that once 'relevant' factors have been identified, they can be subject to change, thereby increasing participation. Psychological factors, for instance, such as anxiety and depression are common following a heart attack and depression has been reported by 15-23% of heart attack patients (Cooper et al., 2002; 2005; 2007; Johnson & Heller, 1998). Both are implicated in and associated with a decreased likelihood of attendance and a reduction in changing 'risky' behaviours which cardiac rehabilitation seeks to promote (Newman, 2004). Indeed, in some of the participant responses highlighted in Chapter 5 by Winston, Alison and Elspeth, they reported changes in their mood, appetite and sleeping patterns which can be indicative of mood disorders. Other participants highlighted that they had experienced unusual emotions and feelings since their heart attack and indeed, some participants, particularly Jason and Maureen, reported panic and anxiety attacks which for them, were highly significant and were causing immediate concern and compounding the disruption to their lives. While psychological factors are important, there has been a tendency for studies within the field of cardiac rehabilitation to be underpinned by a primarily bio-medical approach towards understanding these factors and to seek to 'isolate' individual variables for non-attendance. These, however, can differ due to

participants' social context and are mediated by age, gender and social position. In turn, previous research highlighting 'individual' factors for explaining differences in engagement may be obfuscating other influential factors which can mediate such differences. This thesis has so far shown that experiences and responses to the heart attack are complex and contingent on a variety of factors and although individuals may respond in particular ways, non-attendance, like recovery more broadly, requires a greater degree of understanding of participants' day to day lives and the habitus so that recovery (and engagement) can be understood more holistically.

It has been stated previously that little attention in the literature has thus far been given to service capacity as another variable for low uptake and attendance (Clark et al., 2002; 2005). It has also been outlined that provision of services is not at sufficient levels for all those who require them (BHF, 2008) and during the interviews with staff, which will be analysed and presented more fully in Chapter 7, they stated that expanded provision of the service in Fife, particularly for encouraging and increasing access for certain population groups known to be under-represented as attenders, would be ideal. However, lack of funding was to a certain extent, constraining development of the cardiac rehabilitation service in Fife. Organisational factors such as limited capacity and the inherent inflexibility of the current model and local service factors were highlighted and can differentially impede access for certain groups of patients and dissuade attendance (Tod et al., 2001; 2002). These institutional factors, over and above other influences that may not often be considered, may already hinder participants' ability to attend. In this study, the sampling strategy used was advantageous because barriers to engagement (which may be experienced differently for men and women) can also be highlighted for participants from both 'deprived' and 'affluent' areas to show how place factors may impact on engagement.

In the case of NHS Fife cardiac rehabilitation, during the research study period, the service was undergoing a re-design and a number of unintended consequences of the re-structuring became evident. The design of this research focusing on Phase 3 of cardiac rehabilitation was outlined in Chapter 3 but consideration is required to be given to the earlier parts of cardiac rehabilitation due to the linear nature of the rehab model with

multiple influences during early phases likely to impact on engagement with later phases. Participants were asked what they perceived were barriers to their attendance and in the first instance organisational factors were indicated which for some, influenced their engagement at Phase 3. The following sections will outline some of these barriers.

## Barriers to engagement with cardiac rehabilitation

*Organisational barriers: provision of information*

It has been stated in earlier chapters that having a heart attack was a disruptive and often shocking event for many participants. Cardiac rehabilitation can provide, at the initial stages after the heart attack, reassurance and support and was an important source of information for participants and their family members. At this stage of cardiac rehabilitation, Phase 1, which is in the hospital immediately after the heart attack, participants were a captive audience where they can be informed about CR and staff can provide them with the Heart Manual[37] (Lewin, 1994). The provision of the Heart Manual is standard procedure for most heart attack patients in NHS Fife. It provides home based self-management and can be used as a stand-alone rehabilitation programme for those who are unable to attend the later, more structured forms (particularly Phase 3) of cardiac rehabilitation. It is particularly useful for those with other health complications or the very elderly. Alongside initial contact and information provided on the ward from cardiac rehabilitation nurses, the Heart Manual can serve as a useful reference tool to alleviate some of the anxiety and worry in the immediate aftermath of a heart attack. Within this study, all participants were deemed eligible for cardiac rehabilitation and it was assumed they would receive the Heart Manual; however, occasionally this was not the case,

[37] The Heart Manual is home based standardised self-management programme developed by NHS Lothian that helps individuals recovering from a heart attack. It was developed in 1992 and provides an evidenced based approach heavily influenced by a cognitive-behavioural approach. The Heart Manual can be a stand-alone rehabilitation programme or can be integrated with existing hospital/community based programmes. It provides information about lifestyle changes, psychological adjustment and medicines and addresses cardiac misconceptions and beliefs about causes. Further advice and information, a home exercise programme and stress reduction strategies are also included.

> **Peter:** "I hadn't had the heart book but one popped through the door last week because I didn't have a programme to follow. I was looking at the heart book when I was in the Victoria then at the Royal Infirmary but they actually took it off me at the Royal Infirmary" (male, 58, nma).

A number of participants were not always admitted to the Coronary Care Unit at Victoria Hospital as their condition required them to be immediately transferred, most often to the Royal Infirmary in Edinburgh. The procedure most often performed on these participants was angioplasty[38] (where stents are fitted) and seventeen participants (14 men and 3 women) in this research had this procedure. This organisational practice resulted in some of these patients not being re-admitted to the CCU at Victoria hospital, Kirkcaldy, but rather being discharged home, often missing out on Phase 1 information about CR from a dedicated CR nurse (and sometimes not receiving the Heart Manual). This was potentially a barrier to future stages of cardiac rehabilitation perhaps in part because they were unaware of what cardiac rehabilitation entailed and/or its utility was not 'sold' to them adequately. This will be further highlighted by staff participants in Chapter 7.

Given the uncertainties and anxieties the heart attack provoked for many participants, having relevant information empowered some of them to understand more clearly a) what was happening in their bodies, b) what they could expect over the forthcoming weeks of their recovery and c) what they could do to improve their heart health. This information seemed to give some of the participants an increased sense of control over their condition,

> **Ray:** "The manual and the DVD that ye come home with are very good. And I can relate to a lot of things in that Manual. I've read the book back to front. You leave the hospital with the DVD and the manual and I have read it about how to look after yourself, why you had your heart attack, about your diet, about stress" (male, 60, md, attender).

[38] Angioplasty is a procedure which involves using X-ray images to examine blood vessels and blood flow to the heart to pinpoint the location of a blockage. If a blockage is found, by placing a metallic cylinder (bare metal stent or drug –eluting stent) in the artery, this will keep it open and allow blood to flow more freely.

> **Celia:** "Aye, it was helpful because obviously, ken, you read it and ye ken, it kind of helps you through any doubts you've got about anything and you can just look up the manual, eh" (female, 57, md, non-attender).

The purpose of providing participants with the Heart Manual is not only to present information about the heart attack and recovery process but to lay the foundations for behavioural modifications (reducing/stopping smoking, increasing exercise, improving diet etc.) that CR staff would reiterate during other stages of CR. At Phase 2, nurses or Heart Manual facilitators visited the home a number of weeks (between two and four) after discharge from hospital. These visits provided an opportunity for CR staff to work closely with participants and family members to discuss and clarify any issues and provide general advice and information. If other assistance was required, Phase 2 staff liaised with GPs or other health care professionals if needed. 'Individualised' lifestyle behavioural goals were set and agreed with participants at this stage and Phase 2 CR staff often subsequently visited participants over the course of a number of weeks. The Heart Manual played a leading role during this phase. At this point, the onus was on the participant to make the agreed behavioural changes. This stage was seen as the time when participants would comply or resist such information and knowledge. For example, not all participants were enamoured with the Heart Manual. Laurie highlighted his reaction to it in the following way,

> **Laurie**: "What did I think? What a bloody cheek!"
>
> **Sarah:** "Can you explain that a bit more."
>
> **Laurie:** "I felt like I was back in work and they had handed me something to get ready for a seminar. The last thing on earth that I wanted was a tome to read on the day after I had had a heart attack. That was what I was feeling at the time – but what a lifeline it was" (male, 59, nma, non-attender).

A number of patients remained unsure of its efficacy for them,

> **Andrew:** "I never made the effort to go through it, and maybe I should. Well I had had the heart attack. That's aboot the only reason. It didnae seem like a very interesting subject [laughs]. It's your life we're talking aboot. Oh well, so what, but maybe I will read it, you never know" (male, 76, md, non-attender).

A number of participants, particularly men focused most specifically on the fitness and activity sections of the Manual and believed that their levels of fitness far exceeded the levels outlined in the Heart Manual. The following quotes outline a perceived inconsistency between their understanding of their physical abilities and the comparable level of ability outlined by the Manual. Keith, Laurie and Peter suggested that,

> **Keith:** "I got a manual in the hospital. The blue one. Aye. I mean, the stuff in that I hardly looked at because I was doing what they were saying you should be doing and with bells on basically. I was ahead of them on the thing eh? I was on my feet in hospital once they said it was ok and I was walking"
> (male, 47, md, non-attender).

> **Laurie:** "I stuck religiously to the exercises until I thought, 'Hang on a second. This is for somebody who has had a severe heart attack, really geared up for that. I don't think I had had a severe one. It hadn't flawed me. I was able to get round, walk up and down stairs and things like that. I found it difficult to understand where it was heading towards. How for instance, did you know how many of the exercises to do? It was very vague. Too vague"
> (male, 59, nma, non-attender).

> **Peter:** "it seemed to be geared towards people who have a very sedentary lifestyle anyway. I was very fit prior to having the heart attack so if I followed those guidelines, I'd be going backwards. So I was feeling very frustrated in what I was supposed to be doing or not doing, or still can do"
> (male, 58, nma, non-attender).

For others, the Heart Manual did not provide the relevant benchmarks and for a number of participants, not being able to align their behaviour with the suggested outcomes of the Manual, was a source of frustration and anxiety. Joe highlighted this,

> **Joe:** "The problem is, you see, when I came oot fae[39] Kirkcaldy [hospital] I was trying to go by the Manual but I wisnae able to dae[40] what it said in the book and I was getting a bit frustrated because it said go for walks and increase the distance and I wisnae able to dae that. Even short distances I wisnae able to dae either and I thought it was me that was wrong. But it turned oot it wisnae me that wis wrong because they had to take me in and put a stent in. And since then I can go long walks and dae everything as I should dae"
> (male, 74, nmd, non-attender).

Interestingly, some men in this research often focused on the physical exercise elements of cardiac rehabilitation and the extent to which they could or could not achieve what the guidelines in the Manual were expecting. The self-help 'one size fits all' generic nature of the Manual particularly related to physical capabilities and fitness in fact contradicted what some men perceived their bodies could do. Acceptance of having the heart attack and denial of the changed body may counter some of these men's sense of masculinity and self-identity, further highlighting uncertainties about what their bodies can do. The flaws in this type of generic information is that it expects individuals who have just experienced a heart attack (with all the physical, psychological and emotional ramifications) to appraise and interpret their circumstances and capabilities post heart attack (which are new and unfamiliar) and match them with the generic Heart Manual information.

The Heart Manual contains a wide variety of information on a number of issues, such as lifestyle factors, treatments, medicines and ways to deal with worries, sleep problems and depression. For some participants, it was too much to take on board and for others, the way in which it was presented was too simplistic. The Manual features many pictures which depict an overweight male heart attack patient. This can serve to reinforce the gendered construction of a 'typical' male heart attack candidate. It can be suggested that the Heart Manual requires some development and a greater degree of gender sensitivity of the heart attack experiences ought to be included. The Heart Manual provides

[39] "oot fae" = out from
[40] "dae" = do

information at a specific point during participants' recovery and although it can be a useful reference tool there were contradictions and uncertainties in the participant accounts as to what they could be expected to physically achieve particularly during later phases of CR when for some participants' 'normal' life was being resumed. From the accounts above and below, it can be suggested that complying with the rehab project is about more than following the model and participants' own perspectives on their health and abilities in the context of their lives can influence how they approach CR;

> **Isaac:** yeah, it's helpful for information explaining about your medication and what each one does and there's a bit in there about fitness and doing wee exercises and stuff and writing doon how far you've walked and how hard it was and then. For all your fitness stuff, there's a fitness programme in there but I dinnae think many people actually follow that" (male, 56, nmd, non-attender).

> **Hamish:** "By week sort of five or six I was beginning to ignore it a wee bit. I would have said I was pretty religious up 'til four weeks and then after that I sort of tended to drift away a wee bit" (male, 77, nma, non-attender)

The medical model of CR which has influenced the compilation of the Heart Manual outlines a strategy for recovery from Phase 1 when the patient is hospitalised through to Phase 4. At Phase 1 patients can feel helpless and lack control over their condition. There may often be a gap in power between the patient and the staff member related to knowledge about the heart attack and how best to recover (Lupton, 1997; 2003). The sick person must follow medical staff's directions and advice, investing faith in their expertise and the power relationship becomes critical in order to establish and encourage compliance on the part of the patient. However, in the case of a heart attack, this compliance ebbs and flows during the recovery period because there are myriad other factors including uncertainties and worry about recovering, as well as other day to day activities, duties, responsibilities and relationships which are happening in participants' lives which can impact on how their recovery may progress. In addition to these various factors, there are often multiple medical interventions simultaneously at play which can

be perceived by patients as contradictory and over which they have little control contributing further to their sense of uncertainty.

*Surgical interventions and 'fixing' the body*

A number of participants in this research were either not initially admitted to the Victoria Hospital in Kirkcaldy or were admitted but transferred shortly thereafter to the Royal Infirmary to undergo an angioplasty procedure. This procedure was performed on fourteen men and three women participants in this research and this idea of being 'fixed' emerged during the analysis as an important point and it additionally emerged during the staff interviews and will be further highlighted in Chapter 7. For the participants who had this procedure, they highlighted that consistency in provision of cardiac rehabilitation Phase 1 was variable or absent altogether and the majority of their information was provided by Phase 2 staff who visited, sometimes up to a few weeks after, when they returned home.

The frightening and shocking nature of their heart attack and the confusion and disorientation caused by being transferred to Edinburgh for a procedure, however lifesaving, required participants to place themselves fully in the decision making hands of medical staff performing the procedure. The angioplasty procedure is medically highly effective, and at the same time, the participant is usually conscious and can fully observe what is occurring in and to their bodies during the procedure. Laurie, Christopher and Donald marvelled at the process in the following ways,

> **Laurie: "**I had my heart attack. They transferred me to Edinburgh. I got my stent, which just blew me away. It was… I'd rather have that than go to the dentist. They went in through my wrist. Wonderful. Absolutely amazing" (male, 59, nma, non-attender).

> **Christopher:** "noo that I've seen the pictures on the screen across in Edinburgh and seen this tiny thin artery that was causing the problem being

opened up to be the same as the rest of them, I feel as if I'm brand new so there's no reason why I cannae[41] do anything" (male, 57, nma, attender).

**Donald:** "That's what fascinated me when I was lying in the theatre in Edinburgh, they had the screen up above you and you could see all your heart in there because that wee mark there, that's where they up and went in. You could see it coming up, blowing up your arteries and such like, but yeah, it's like watching ane of those programmes" (male, 74, nmd, non-attender).

The experience of seeing their bodies being fixed had a significant effect on many of the participants. There was little doubt that this procedure affected participants' conceptualisations of their health and recovery and for some it resulted in a kind of epiphany - "I've been given a second chance"[42] and the conclusion that their heart "is better now that it was before."[43] Many of the participants reflected on this procedure and articulated that they were now 'fixed.' This view was most commonly articulated by men who had undergone this procedure as it seemed to provide a tangible, mechanistic solution to their heart problem. Men, it has been stated previously, are often said to be uncomfortable with the experience of illness and the notion of being 'fixed' may have provided some of the men with an opportunity for "doing gender" by allowing them to distance themselves from their bodies (Saltonstall, 1993). Viewing the procedure on the screen in a disembodied manner abrogates the responsibility for the 'fixing' it to 'experts'. By constructing this procedure as being 'fixed' it represents another way of conceptualising the heart attack as a singular event, rather than a symptom of a chronic disease, which can re-occur (Wiles & Kinmouth, 2001).

The marvellous results of this procedure were animatedly discussed by participants and distinct improvements to their health were outlined with many benefitting from improvement almost immediately. Linking the 'unfixed' body to the 'brand new' one after the procedure, Philip, Derek, Joe and Greg reported that,

[41] "cannae" = cannot
[42] Bruce, male, 69, md, attender.
[43] Derek, male, 64, nmd, attender.

**Philip:** "I went over to Edinburgh and got the angiogram on the Friday. They fixed me and I was oot on the Saturday. They put a big stent in the back of the heart someplace in one of the arteries there. The guy said prognosis excellent Mr Black. The guy said "I've fixed you Mr Black[44] after a struggle but the prognosis is excellent" (male, 66, nma, attender).

**Derek:** "Well, they've fixed it. As far as I'm concerned my heart now is better than it was before. I mean it's not bothering me now. I got one stent put in but as they were pulling that out it deflated the balloon and one end of the vein fractured and they had to go in again and extend it. So there's two together but there's only basically one. I thought it was great watching it. I was lying there thinking 'I don't believe it!'" (male, 64, nmd, attender).

**Joe:** So they took me back in that day and he decided then he would put in the stent and since they did it, I mean the difference between that morning and that night was just immense. The stent just made all that difference. It's a pity it wisnae done faster, I woulda been more active earlier on than I was. But I felt, ken, the next day I was just…well, that day, 'cause my daughter remarked, she said that's no' the same man as I took in in the morning. I was just feeling that much better when I came oot at night. It's definitely what was needed and that's it fixed. So that's me" (male, 74, nmd, non-attender).

**Greg:** "I was probably a wee bit nervous to start with but I was quite relieved that I had the heart attack because they found a problem and they've managed to fix it. I saw the surgeon the other day and he said that my arteries are fine so it's just up to me to get my health back and kind of get my health going again. Pick myself up" (male, 48, md, attender).

Undoubtedly, these procedures were highly effective in relieving pain and restoring heart functioning for participants. However, there may be implications for the wider cardiac rehabilitation programme. The Heart Manual with its low tech approach (and onus on the individual to follow it step by step) cannot compete with the dramatic effects of an angioplasty procedure. Improved physical functioning after being 'fixed' can render the

[44] Mr Black is a pseudonym

linear cardiac rehabilitation model and generic Heart Manual inappropriate for some. Completing the cardiac rehabilitation programme and following the Manual reminded some of the male participants of their health vulnerabilities whereas being 'fixed' restored and re-established in some ways, their sense of masculinity and self. Hamish and Laurie, both of whom had undergone angioplasty, pointed this out regarding perceptions of their physical capabilities after being 'fixed' compared to what the Manual guidelines outlined. For both, this raised a degree of uncertainty,

> **Hamish:** "when the nurse came round she said, "Now, just sort of walk round the garden." I thought, walk round the garden, that's not much exercise walking round the garden. I felt I was able to walk a lot more than that. And I was walking, within a week. I would have said I was ahead of the Manual. I'm not boasting about that, but I felt I was able to do it, I wasn't getting any pain, I wasn't out of breath, I didn't come back knackered. I came back fine"
> (male, 77, nma, non-attender).

Laurie also suggested that although he had followed the Manual, his recovery, in his opinion, was good and he further questioned the purpose of the Manual,

> **Laurie:** "I stuck religiously to the exercises until I thought, 'Hang on a second. This is for somebody who has had a severe heart attack, really geared for that.' I don't think I had had a severe one. It hadn't flawed me. I was able to get round, walk up and down stairs and things like that. So I did them anyway, and every time I had a mishap, like when I was back in hospital I would start again, from the beginning. And I found it difficult to understand where it was heading towards. How for instance, did you know how many of the exercises to do? It was very vague, too vague. You see I'm the kind of person. I can do lots of things if you show me exactly how to do them. But if you don't, I'm all at sea. I need to know how to do it, how to progress, how to measure things" (male, 59, nma, non-attender).

Conversely, none of the women in this sample used the metaphor of being 'fixed' despite three women having undergone angioplasty. Females tended to conceptualise this

procedure and cardiac rehabilitation as part of the continuum of recovery. For one female participant who had sustained a serious heart attack and who had had multiple complications during angioplasty, this procedure was not a simple, straightforward 'fix' but rather a complex, distressing procedure which just amplified her shock and surprise at sustaining a heart attack,

> **Vivian:** "after my heart attack I was having major problems and then I collapsed and I had to go back in at the end of February 'cause I had a stent put in but the stent collapsed and I had a blood clot. So, now I've got 5 stents 'cause the wall of the valve collapsed totally. So I had 4 drug relating stents put in and then another one rebuilt, but yeah I've had quite a traumatic time. I had major time with everything and I was frightened. I honestly thought I was going to die" (female, 54, nma, attender).

Unlike Vivian, some of the men who had undergone this procedure seemed less inclined to openly discuss their fears and vulnerabilities for their future recovery. Perhaps in conjunction with describing the functional and mechanistic nature of the body as machine (Chapter 5) and the body being 'fixed' these combined to form an acceptable and presentable form of masculinity allowing some men to downplay their anxieties and emotions vís a vís their broader recovery experiences. Further research would be necessary in order to fully understand the complexities of gendered responses to 'being fixed' and the consequences that this procedure may have for participants' engaging with other parts of cardiac rehabilitation.

The process of recovery highlighted thus far shows differences between the stages of rehabilitation from the captive (compliant) audiences during Phase 1 (in hospital) and to some extent at Phase 2, when participants are at home recuperating. It has previously been outlined that there is a reduction in engagement for cardiac rehabilitation in NHS Fife as the CR phases progress. By the time the Phase 3 part occurs on average 6 – 8 weeks post heart attack (but often longer for some participants in this research due to individual and organisational issues), the barriers to engagement for many participants may have increased immeasurably. It has been shown in Chapter 3 (Table 2) that twenty

eight participants (21 men and 7 women) did not attend Phase 3. Due to the service changes and new procedures for referring patients to Edinburgh, gaps were created in terms of initial hospital based information provision about cardiac rehabilitation for participants in this research. It was also probable that contact from cardiac rehabilitation staff took longer than expected due to changes in referral procedures (Chapter 3). Previous research has shown that understanding and exploring patients' perceptions of their heart attack and providing relevant information, tailored to individual needs, soon after the heart attack can result in better recovery (Petrie et al., 2002; Wiles & Kinmouth, 2001; Jackson & Emery, 2013). This lack or delay in relevant information may have increased uncertainty about the benefit of cardiac rehabilitation for a number of participants. For example, Ralph outlined that he waited 4 – 6 weeks for someone to come to his home to see him. He also demonstrated a lack of awareness about what cardiac rehabilitation at Phase 3 would entail,

> **Ralph:** "I mean, what do they want me to dae, go to an aerobics class? That's the thing that's kind of putting me off. Going to the physiotherapy [cardiac rehabilitation] thing is kinda going to an aerobics classes. if I found out better what it was, what kind of physiotherapy, what it was that ye were going tae dae, well, I've still got it in my mind, this vision, that it's going tae be like an aerobics class" (male, 56, md, non-attender).

For those participants who did not attend cardiac rehabilitation at Phase 3, a number of reasons were given. Some were unsure about how it would benefit them whereas others perceived that it was just not for them and perhaps misunderstood what the classes comprised, similarly to what Ralph articulated above. Lena and Isaac explained their reasons for not attending,

> **Lena:** "Aye, I could go, if I wanted to. But it's definitely not my kind of thing. I've just never been in to gyms or anything. I'm just not that kind of person. Aye. I'm quite happy having a walk aboot" (female, 62, nmd, non-attender).

> **Isaac:** "the doctor says I should go back, you should go back and the district nurse was telling is that I should go back. I'm in for a row the next time I see

her because she was expecting me and I didnae turn up. It's just if it's no' your cup of tea, it's no' your cup of tea. You know what I mean?"
(male, 56, nmd, non-attender).

These extracts suggested that correct and timely information about cardiac rehabilitation is very important for engaging participants, particularly for those who may be reluctant (for a variety of reasons) to attend. Both staff and participants outlined that engagement could also be compromised by factors over which individuals have little control. This next section will highlight infrastructural barriers.

*Infrastructural barriers*

Certain infrastructural and practical barriers which impacted on engagement were outlined by participants. Common responses included timings of classes not being suitable or flexible enough, especially for participants who had returned to work or who did not have flexibility in their employment to attend existing classes. The uncertainty of when life would return to normal for participants, especially those of working age, was often connected to when they could resume work. Other participants not attending Phase 3 cardiac rehabilitation raised other practical issues, such as parking issues. For those who had cars, hospital cardiac rehabilitation programmes often incurred parking costs and the inconvenience of not being able to find a space was mooted. Reliance on public transport and negotiating and timing buses to attend classes for those without their own transport was highlighted. In addition, some participants mentioned that the locations of classes were inconvenient. These transport issues were articulated as a barrier for some of the participants,

**Hamish**: "Why should I have to go away into Glenrothes and spend money on petrol and time, so I declined. Maybe I was wrong to decline, I don't know. But I just felt that, no, it wasn't for me" (male, 77, nma, non-attender).

**Neil**: "They did say there is a class at the Lomond Centre, but I need three buses to get there, I mean it's ridiculous. The Lomond Centre is here in Glenrothes. I need three buses to get there. I've got to get a bus down to the

> town centre and so on and then wait for buses to come back. It's the bane of my life, waiting on bus stops for buses, particularly if it's raining, and the one I have to go and wait for long periods of time doesn't usually have a seat or a cover so I get a bit sort of transport cautious in the sense that I look and think to myself, oh God that's two or three buses to get down there"
> (male, 69, nmd, non-attender).

However, other patients who were also reliant on the buses for transportation were prepared to negotiate the timings in order to attend,

> **Alison:** "I have to get two buses to the Lomond centre. The day is ok. The one and only bus I can get gets me there half an hour before the class starts so I have to hang around but apart from that, it's not too bad. But I have to get a bus from here to the town centre and in healthier days, I would've just walked it but I'm not able to do that at the moment. Usually I hop off that bus and nip in and get something for my lunch which I take along to the Lomond centre 'cause it goes over lunchtime and I have to eat something. Then fortunately when it finishes it's about ten minutes before there's a bus back to the town centre so coming home is ok. It's not too bad"
> (female, 64, nmd, attender).

Timings of classes were a barrier for some participants, particularly those who were of working age. Although classes had been extended and were now provided at different locations in the evenings, this was not the case at all locations where Phase 3 classes were delivered. For example, both Fergus and Ralph highlighted in Chapter 5 that they were 'off sick' from work and were uncertain about when and if they could return to work. Gavin also pointed out that,

> **Gavin:** "I could be back at work next week and the classes are during the day at the Vic [hospital]. I got told that they were at Glenrothes but when I did go back up to the Victoria they said they're only Tuesday. Tuesday afternoon or something" (male, 60, md, non-attender).

> **Ralph:** "It's hard to say [if I would go] 'cause if I get to my work, I'd probably say no. If I dinnae get back there's every chance I would (male, 56, md, non-attender).

The uncertainties (internal and external) not only impacted participants' sense of self, but raised anxieties about their responsibilities within and to their families especially concerning work which were perhaps more pressing concerns for them at the time of interview, than attending CR classes. Adam highlighted his stressful management position as potentially impacting on his ability to attend classes and both Elspeth and Lena cited co-occurring health problems and family and work commitments respectively which impacted on their ability and decision to not attend. For other participants, where the classes were located was a barrier to attendance,

> **Keith:** "I was told there's one in Dunfermline or one at Bowhill. I says, 'I'm not going to Bowhill' which is along the road 'cause it's oot of the way. I'm no' going there. I could go tae Bowhill which is 20 minutes along the road but I'm no' doing that" (male, 47, non-attender).

> **Fergus:** "What I'm trying tae say tae ye, is I dinnae see the point in driving 8 mile tae get telt[45] your going on a treadmill if ye ken where I'm coming fae. It's pointless for me tae go tae Kirkcaldy (male, 61, md, non-attender).

There is little doubt that the practicalities for attending given above were real and problematic concerns for participants. Some of these factors such as participants' working responsibilities and transport issues such as bus timetabling and car parking spaces cannot be addressed by the cardiac rehabilitation service. However, locations and timings of classes are service capacity issues. Providing a greater degree of flexibility and addressing some of these issues would be an appropriate response to some of the barriers which participants have cited. This evidence ought to be utilised by NHS managers tasked with delivering services adequate for their cardiac populations, particularly when some of these barriers may differentially impede access for those most

[45] "telt" = told

in need. Participants stated that transport, class timings and the location CR classes were important considerations for them in choosing to attend or not. For some participants, the challenges involved in attending are a reality and these challenges may well deter engagement. With anxieties and uncertainties about their health and physical capabilities combined with the additional worry of costs involved whether that be for petrol, parking or bus fares, these factors may in themselves preclude attendance. However, these 'practical' barriers may belie deeper seated fears and anxieties for some participants about their ability to return to 'normal.' The next section will explore the extent to which differences in situated health and recovery experiences (including demonstrations of gender) may serve as barriers to engagement for some participants.

*Situated and gendered recovery experiences*

It has been highlighted within this chapter that health and health behaviours (including lifestyles) are influenced by participants' social contexts and different responses to rehabilitation have been outlined by those from 'deprived' and 'affluent' places. Barriers to attendance were related to situated and gendered experiences of the heart attack and recovery, but they varied in different ways. Reluctance in attending cardiac rehabilitation Phase 3 appeared to occur more obviously within the men's accounts, due to the greater numbers of men sampled and interviewed. Nevertheless, certain insights can be drawn at this point. For example, despite a number of the participants in this research not attending CR, their recovery was being aided by information they had received during Phase 1 and Phase 2 because the majority of participants in this study reported that they had made changes to their lifestyle either in drastic or smaller ways, immediately after the heart attack itself and at the time of interview (which on average took place 14 weeks after the event). Many participants reported that they had stopped/reduced smoking, were being more mindful and trying to improve their diet and endeavouring to take more exercise. For example, Adam and Bill (who did not attend Phase 3) exemplified the changes made despite reportedly being dedicated smokers who did not believe they would quit. They contextualised these changes to their lifestyles (showing compliance with CR principles) relative to other aspects of their lifestyle,

**Adam:** "It's a battle and you fall back to things that are comfortable but my smoking though, well, there's a wee shop round the corner and the girls sent me a card to wish me well and they won't sell me cigarettes now, so I think that's the hardest one. I didn't get the chance to stop the way I wanted to. I just got told to stop. Lying in the hospital bed my wife says she was throwing my fags and lighters oot. I would've liked the chance to have a last fag. I always smoked and what I'm trying to do is battle as I remembered how much weight I put on last time [I stopped]. I'm really working to keep my weight stable. So I'm battling on two fronts. Now it's a whole joined up approach. I've got to do it all. I can't do the bits I like, but it's murder, murder!" (male, 44, nma, non-attender).

**Bill:** "I never thought it [heart attack] would happen to me but I suppose thinking back, a smoker, my diet, all the things I've learned since my heart attack, I was probably a heart attack waiting to happen. I smoked all my life. Never, ever thought I would stop smoking. Never tried to stop. Didnae want tae stop. But it's a huge change because if I'm daeing something, its just that I'd generally be haeing one, ken? If I was daeing something, I'd be haeing one. If I was at the fishing there would be a fag hanging from my mooth. In fact, I couldnae go oot the hoose without making sure I had my fags so that has been a big, big change. But since the heart attack, I've been getting on good. The nurse who comes tae see me has also set a plan for changing my diet but she wasnae awfy fussy about me making big changes tae my diet because I've stopped smoking, but my diet was terrible before. I'm no' used tae cooking fresh food so just getting things that I like is a bit hard and I'm trying tae get things sorted oot. I'm daeing no bad but drinking wise, well coffee was my downfall. I could sit and drink 30 cups of coffee a day. I've cut doon to 3 or 4 cups but it's replacing it. I need something to replace it with"
(male, 49, nmd, non-attender).

Viewing the body and its constituent parts in isolation from the rest of participants' lives, as CR tends to do, contrasts with participants' holistic understanding of their recovery within the contexts of their day to day lives. Thus, not attending CR does not mean that behavioural changes are not being made or that participants are purposefully resistant in

all cases. For some participants, both men and women, the actual practice of attending a cardiac rehabilitation class in the hospital or community centre may be an irregular social practice for them. This practice may not constitute part of some participants' lifestyles and by extension their identities. For some men, particularly those from deprived areas ('mining deprived' and 'non-mining deprived areas'), attending a class which might be some miles away to do exercise in a gym setting was articulated as being completely anathema to their usual practice. Therefore, there may be a reluctance to participate in classes due to this. Fergus highlighted this,

> **Fergus:** "I dinnae see the point. I mean your hoose is your gym! I can put my feet under that couch and give myself pull ups. I can pull myself up on a door. I've got stairs. I go doon tae Leven gym so I'm no' wanting tae go tae Kirkcaldy and dae all that" (male, 61, md, non-attender).

This attitude may have less to do with remaining physically within familiar areas, although there is no doubt this is important after having a heart attack, but it may also symbolise a way for participants to 'get back to normal' on their own terms relative to their disorientating experience, which provoked uncertainty and disrupted their sense of bodily security (Charmaz, 1995). Certainly some men in this research demonstrated their masculinities in a number of different ways by *not* attending cardiac rehabilitation. Some men articulated that they were not keen to participate in this type of practice in part because doing so can be interpreted as an affront to their sense of masculinity. Some men in this research conveyed and highlighted how their sense of identity included stereotypical characteristics of masculinity such as being physically strong, independent and displaying a tendency to refuse help and be emotionally restrained (Gough, 2006; Robertson et al., 2010). This often took the form of men reporting that CR was 'not my thing' or 'no' for me.' For example, Adam and Walter conveyed that going to a gym (which was usual practice for Adam, but not usual for Walter) to participate in CR and to be directed and regulated by CR staff was a particular issue for them,

> **Adam:** "I don't want some spotty 19 year old kid called Damian showing me how to do a bench press or I'm with people in their 60's or 70's and the only

> exercise that they're used to doing is pushing their remote control. I think I would reach for the knife and cut my wrists! I don't really like the idea of being stuck in a sweaty gym with some 19 year old kid telling me what to do. Part of the reason is that I used to train hard before. I've done it all so I don't, there's a certain inertia to get my lazy backside up and do that so I'd rather do things myself. I'm pretty self-sufficient" (male, 44, nma, non-attender).
>
> **Walter:** "That's what I'm saying hen. It's no' my thing. Some people are different from other people and I'm one of them that I want tae do it my way. No' standing up [demonstrates actions, waves arms around] and ye feel like a bairn"[46] (male, 67, md, non-attender).

The idea of talking about their heart condition with others within a cardiac rehabilitation setting was fairly abhorrent and revealing the self was not a relishing prospect for some of the men. They conveyed that they did not want to emotionally 'share' stories about their heart attack experiences,

> **Fergus:** "I mean I've had the heart attack. I'm no' wanting tae be, I dinnae want tae be talking tae somebody who's already had a heart attack and I'm talking aboot my heart attack. It's like all the old women saying 'Oh, I've got this wrang[47] wi' me or I'm on this pill' and I'm saying to mysel' that would bore me!" (male, 61, md, non-attender).
>
> **Joe :** "Och. I dinnae agree wi' it. Meet there and sit and discuss. All they discuss is their different problems and I'm nae interested in other folk's problems really. I just dinnae like going sitting talking to folk I don't know. Ken, I prefer just mixing wi' folk I know and getting on wi' life. I've nae reason for nae going but I just didnae think it would dae me any good"
> (male, 74, nmd, non-attender).

Some participants also suggested that they would have few commonalities with others and concluded that they just could not 'see' themselves in the cardiac rehabilitation

[46] "bairn" = child
[47] "wrang" = wrong

situation. For Walter, who attended one class and then decided it was 'not for him' at the second class he reflected that,

> **Walter:** "Aye, well they [other participants] were all hefty[48] and elderly. Half of them couldnae get oot of their seat let alone dae anything else. I said, 'look hen, I'm no' being cheeky but I come up here to tell you the honest truth, I won't be back.' It's no' my scene, it's no' my style. I can walk my dogs and have enough exercise. I've been on my feet all my days and to come here, I says, no. This is just depressing me. When you look at some of the ones that were there. Fair enough, they could do wi' losing about 10 stone, let alone anything else. I'm no' needing a diet. But I turned roond and said to the lassies, it just depressed me the first day, standing there wi' the dumbbells. When I worked there was 100 weight bags of fertiliser I used tae throw aboot. I've always been active. I've never been a man that's sat on my bum. They used tae call me the 'flying Scotsman'" (male, 67, md, non-attender).

For some participants perhaps once the initial threat had subsided and they had started to 'get back to normal' it may be the case that once back in *terra familia* "a lot of them don't feel that they need cardiac rehab" (staff member). One of the participants, Isaac, who had a stent fitted, reflected that,

> **Isaac:** "You start off with all good intentions then as the weeks go on you lose interest and you dinnae bother doing it. Which I suppose is normal, unless I'm abnormal. You tend to lose interest after a wee while. Things go back to normal and you just carry on" (male, 56, nmd, non-attender).

## Conclusion

This chapter has shown that recovery from heart attack (with or without attending CR) is contingent on a variety of factors – individual, contextual, organisational and infrastructural, which in various ways can impact on attendance in different ways for different participants. The majority of participants who did attend CR reported that staff

[48] "hefty" = large

were very good, professional and helpful and certainly staff involved in delivering cardiac rehabilitation programmes were dedicated professionals, often aware of the complexities of recovery and the barriers for engaging with CR after heart attack which will be further explored in Chapter 7. For those who rejected the idea of Phase 3 CR classes, the constitution of the classes, including other attenders whom they perceived were unlike them, as well as the staff delivering the classes [overwhelmingly female], may perhaps have further threatened participants already uncertain identities in the aftermath of the heart attack. The clinical gaze at this point of cardiac rehabilitation, is to not only do exercise but also discuss the heart attack with staff and other CR participants. For some participants this served as a means of being able to compare themselves with others and gauge the impact of their heart attack condition. For others, being encouraged to share was another example of revealing the self, revealing vulnerability, raising emotions which were upsetting and unsettling and which confirmed (to the self) that their bodies had let them down. Performing the correct behaviour and discourse in these circumstances becomes, perhaps, a moral obligation where justifications for improving health are necessary and expected. In order to maintain a sense of ontological security, distancing the self from unfamiliar situations and people and recovering in spaces and places over which they have some control i.e. their homes, their neighbourhoods, their communities, may be seen as the preferred option.

The next chapter will highlight findings from CR professionals in order to explore perspectives from staff involved in cardiac rehabilitation regarding the extent to which they perceive place effects in Fife have a bearing on heart attack and recovery experiences. In addition, staff's perspectives on barriers to attendance will be highlighted.

# Chapter 7: Staff perspectives about recovery from heart attack and barriers to engagement with cardiac rehab

## Introduction

This chapter will present findings from the interviews conducted with cardiac rehabilitation staff. As stated in Chapter 3, eight staff were interviewed who were involved in the design, implementation and provision of cardiac rehabilitation services in NHS Fife. Cardiac rehabilitation more broadly was a clinical priority area for NHS Fife, therefore gathering staff views about their experiences working with population groups across NHS Fife who had sustained a heart attack was an important part of this study which could illuminate issues about heart attack experiences, but also engagement with CR. Similarly to national trends, lack of engagement with CR was highlighted as problematic in NHS Fife, particularly amongst under-represented groups including those from areas of social deprivation and women, as well as younger working aged people who were highlighted as a population group who were increasingly being referred to cardiac rehabilitation.

It was theorised that staff would have developed their own hypotheses as to the many factors which can impact on patients' engagement with CR. Therefore, it was imperative to include staff perspectives in this study in order to explore their views and the perceptions of differences between patients who attended and those who did not. Staff involved in providing CR to NHS Fife patients have experience, not only of the clinical aspects of heart attack and recovery, but as members of communities in Fife (where all the staff involved in CR live and work), they have acquired working and personal knowledge of place based factors which can influence health (and recovery). One staff member Mhairi highlighted this by saying "being born and raised in Fife gives me an advantage with our population because you understand where they're coming from." In addition, staff insights are rarely included in cardiac rehabilitation research and this study sought to address this oversight.

This chapter will be structured in the following way. Further detail will be provided of the cardiac rehabilitation service in Fife from staff perspectives and the benefits which staff believe CR can bring for those who have sustained a heart attack. Barriers to engagement will be highlighted and these will include organisational, information and infrastructure issues. In addition, staff perspectives related to 'affluent' and 'deprived' populations and place based factors in Fife and the differences these can generate in heart attack experiences, recovery and engagement with CR will be emphasised. By exploring staff perspectives, similarities and differences between their views and those of participants outlined in Chapter 6 will be highlighted which can contribute to theoretical and policy related understandings of heart attack and recovery more broadly, and cardiac rehabilitation services in particular. Concluding this chapter, staff perspectives are discussed about how CR engagement could be improved. Extracts from staff interviewees used throughout this chapter will be denoted by pseudonyms which are presented in Appendix 11. The next section will highlight the changes which were occurring to the CR service during the data collection period which were briefly stated in Chapter 3.

## Contextualising cardiac rehabilitation in NHS Fife from staff perspectives

Staff participants who were interviewed worked across all four phases of cardiac rehabilitation. They were asked what they perceived was the main aim of cardiac rehabilitation and Matthew underlined the general consensus that they want to see "patient[s] back to doing everything they want to do, to lead fulfilling lives and to continue the activities they enjoy" after sustaining a heart attack. Staff outlined the utility of cardiac rehabilitation and stated that it was an effective programme for heart attack. Alice and Laura and Veronica conveyed what cardiac rehabilitation meant to them,

> **Alice:** "to me it's getting patients back to the quality of life they had before, if not healthier than before and letting them see that they can live with heart disease. It's a combination of their lifestyle and medications and it's not a death sentence."

> **Laura:** "it's giving people the confidence to get back into things they were doing before they had their [cardiac] event"

> **Veronica:** "cardiac rehab is really about the patient's treatment to recovery. It's not just about exercise. I know that's a big part of it but rehab to me is about bringing them back to normal health, or even better health hopefully, in a lot of cases."

Within Fife, the CR programme is well established and began over twenty years ago. The NHS Fife CR service was one of the first in Scotland to deliver a structured and 'individualised' programme which set out to support patients and also other family members after a cardiac event. The British Heart Foundation (BHF) and the British Association for Cardiac Rehabilitation (BACR) have been instrumental in the promotion and financing of cardiac rehabilitation in recent years and have recognised that often the establishment of a CR programme depended on a handful of local champions usually responding to the needs of patients. As such, services often grew up in haphazard ways (Bethell, et al., 2000; BACR, 2007). It has been stated that CR has suffered from an on-going lack of investment, inadequate local planning and commissioning and poor attendance rates (Bethell, et al., 2009). For example, Mhairi stated that,

> **Mhairi:** "the programmes in Fife were set up very differently so in the Vic [Victoria Hospital] the programmes were set up by a physio[therapist]. When I came into post it was prime funded by the BHF and from the outset we wanted it to be a comprehensive programme. Again, historically, when cardiac rehab programmes started you'd be one person running a programme and people were working on their own time. It's taken a lot to get out of that and be regarded as a profession. That route has to be followed and solidified and we have to be taken seriously. If they want good services, they're going to have to be prepared to pay for it."

Changes to the service have been on-going in Fife. Fife traditionally had three geographically separate community health partnerships – Dunfermline and West Fife, Kirkcaldy and Levenmouth and Glenrothes and North East Fife. Differences in service delivery and referrals for Fife patients were dealt with variably by the hospitals in each location, for example, by Queen Margaret Hospital in Dunfermline serving patients from

the west of Fife, Victoria Hospital in Kirkcaldy serving those, most often from central Fife and for the North East Fife population, Ninewells Hospital in Dundee which acted as the closest place for admission (which is actually outwith the Fife health board area). Ninewells hospital also provided Phase 3 CR classes for patients from North East Fife. These different ways of working often caused confusion about where patient referrals should be sent and increased the risk of patients being missed totally from rehab (NHS Fife Cardiac Rehabilitation report, 2011). A number of service delivery limitations were identified in the cardiac rehabilitation service in NHS Fife, particularly issues of inequity and inequality in provision and engagement. These issues were outlined for certain populations mentioned previously and as a result structural changes to CR provision evolved. As a result a centralised access administrative point to streamline referrals and re-locate some staff into the community and out of the hospitals was established to standardise delivery across the whole of NHS Fife during 2010, which became fully operational in the Fife CR service during 2010-11. The purpose of establishing this service in the community was to improve efficiency and to better manage patient referrals and record keeping. Phase 3 class provision in communities was increased in areas of social deprivation previously identified from NHS Fife CR audit. The location and timings of classes were increased with more evening classes being arranged. Offering both daytime and evening time classes was seen by the CR service as a way to improve permeability and accessibility to the service. Simultaneously, NHS Fife CR was successful in attracting British Heart Foundation funded health coaches to deliver aspects of the national 'Hearty Lives' project.[49] The next section will outline how staff perceived the service changes impacted on information provision about CR for participants.

[49] Hearty Lives project is a British Heart Foundation programme addressing social and geographical inequalities in coronary heart disease in the UK. Working with local partners, programmes are tailored to community needs. In Fife, health coaching services focused on cardiac rehabilitation in areas of Fife with high level of deprivation are providing patients with support to improve their lifestyles, directing patients to relevant local services and helping to identify and follow up on patients who drop out of various stages of rehabilitation, as well as increase and improve engagement with vulnerable groups who require different approaches in their rehabilitation (http://www.bhf.org.uk/heart-health/how-we-help/in-your-area/hearty-lives/fife.aspx)

## Staff perspectives of barriers to engagement with cardiac rehabilitation

*Organisational barriers: provision of information*

These were significant changes occurring to the Fife CR service during 2010 which coincided with the fieldwork for this research. Due to service changes it was observed that greater numbers of patients were now being referred to cardiac rehabilitation. In fact, the numbers had increased significantly and during 2010 an increase of a third was reported with numbers rising from 560 to 942 patient referrals. This larger number of referrals was expected to remain consistent for 2011 (NHS Fife, cardiac rehabilitation staff personal correspondence, 9th December 2011). Of note, these were referrals into the cardiac rehabilitation service at Phase 1 (hospital) immediately after sustaining a heart attack. For staff involved in this study these organisational changes were at the forefront because all staff were aware of the service changes taking place but the impact these had on the service at the time was not fully known. For the majority of staff participants, these organisational changes were considered a positive development, particularly centralising the access point to one location. Traditionally, Fife comprised three different community health partnerships which encouraged "different ways of delivering the service, different referral criteria, different ways of running the programme" (Mhairi). Despite the initial teething problems which were occurring to the service when the staff interviews were conducted, the main aim of the changes was to improve cardiac rehabilitation for patients and make sure that the service was more uniform,

> **Matthew:** "the idea now is to have a single point of referral so everyone knows if you refer to that point, the patient will be taken into the system, they'll be assessed, they'll be started at the right point of the different phases of their rehab, in the right part of Fife."

However, the downside of these service changes illuminated that some staff were anxious about the changes and the impact these could have for patients being referred for CR.

> **Dawn:** "[CR] nurses have come out of the ward. Their base is at the central point of access [administrative location]. I think there's a bit of a worry that they are going to miss patients on the ward. As long as patients are being referred onto the central point of access, that's fine. But if they're not, then we're going to miss them.

For those staff delivering CR in Phase 2 (in the patient's home) they outlined that there was perhaps a lack of information being provided at Phase 1 (in the hospital). Due to dedicated CR staff being re-located to the central point of access, the onus on cardiac rehabilitation information and provision of the Heart Manual reportedly fell to general hospital nursing staff on the ward. Given their multiple nursing demands, the information about CR could not always be relied upon to be given to patients,

> **Alice:** " [Patients] might be getting handed a Heart Manual but our experience when we're going in to see them is they haven't had a lot of input and basically if the nurses in the ward are busy, that falls by the wayside and I find that difficult"

However, as stated in Chapter 6, the majority of participants in this research were provided with a Heart Manual. Staff members outlined however, that there were often stark contrasts in patient's knowledge and understanding of their heart conditions. Staff involved in providing cardiac rehabilitation in the home at Phase 2 were often shouldering much more of the preliminary cardiac rehabilitation information provision because of these service changes taking place during this time. Alice and Veronica highlighted this,

> **Alice:** "there's a lot of Phase 1 work almost being done in Phase 2 'cause patients are not in hospital long enough. The throughput with the [Edinburgh] Royal is so fast that they cannot provide the education, so the patient's coming home with little input so we're having to give that and certainly it's reflected with the time we spend with the patient. Before we'd spend probably about 45 minutes with a patient on a first visit, maybe up to an hour, but we're finding for the majority now we're spending at least two hours for a first visit."

> **Veronica: "**there's more emphasis placed on Phase 2. The work that staff have to do is more and more and patient visits are lasting longer and longer. You can't just go in and come away again. Patients are more complex now and they've had lack of education within the hospital settings."

Due to these changes and new procedures for referring patients to Edinburgh, gaps were created and recognised by staff in terms of initial hospital based information provision for cardiac rehabilitation. Previous research has shown that understanding and exploring patients' perceptions of their heart attack and providing relevant information soon after the heart attack results in better recovery (Petrie et al., 2002; Wiles & Kinmouth, 2001). This lack or delay in receiving relevant information may have increased uncertainty about the benefit of cardiac rehabilitation for a number of participants in this research and for some the purpose of CR was uncertain. (See Chapter 6, particularly Ralph who highlighted this point). This may then have impacted on their decision to attend CR at Phase 3. For staff, these organisational changes, although being implemented to improve the service, were of concern particularly as "a lot of patients might get missed, particularly those who either didn't have their [cardiac] event in Fife or who were rushed through the system and ended up in Edinburgh" (Matthew).

*'Selling' cardiac rehabilitation*

It was highlighted in chapter 6 that seventeen participants (14 men and 3 women) underwent angioplasty surgery at Edinburgh Royal Infirmary. This procedure, it was stated previously, may have impacted on participants' engagement with cardiac rehabilitation because of the perception of being 'fixed.' Staff highlighted a number of associated organisational issues with these procedures. It has been highlighted above that this practice resulted in some participants in this research not being re-admitted to the CCU at Victoria hospital, Kirkcaldy, but being returned home, thereby often missing out on Phase 1 information. This was an influencing barrier to future stages of cardiac rehabilitation for some in this participant group, especially given the various organisational changes which were occurring to the cardiac rehabilitation service during this time,

> **Maureen:** "the STEMIs [a type of heart attack] they're going straight from Fife to Edinburgh. Get the artery open and out. They could be out within two to three days, perhaps coming back to parent hospital, perhaps not. So having no contact with rehab staff in that phase any longer."

For staff participants delivering cardiac rehabilitation this notion of being 'fixed' was seen as being a potentially undermining influence for attendance and they outlined that getting beyond this notion of being 'fixed' with patients could be challenging,

> **Veronica** "[attendance depends] on whether they think it's important, whether it's seen as valuable for them to attend. Do they really have any awareness of the condition they've had or any interest really in why they're taking the medications they are taking etc. Are they willing to engage in doing anything about their behaviour? A lot of people think they're fixed. You know, if they've had a PCI[50] or stent in, they think 'oh that's me fixed!' Yeah, we've fixed that one wee bit but you've still got the rest to go. For 1 in 10 patients it does happen again. To prevent it happening again you have to do all these things we're talking about and that's sometimes difficult. They'll think 'oh, I've had surgery, that's me now, I'm cured. Bye!"

Another reason for not engaging with rehabilitation is that the angioplasty procedures often allowed patients to return home and get back to a normal life much more quickly than was the case previously,

> **Matthew** "There are more patients who go through the system more quickly who maybe always don't fully appreciate the nature of the illness that got them into the system in the first place and meeting that challenge is quite important, about education, particularly in younger patients...those patients I think quite often, although they're probably happy to take secondary preventative medicine, perhaps don't feel that they need to go through a ten week course going over what happened to them"

[50] PCI – percutaneous coronary intervention is commonly known as a coronary angioplasty

It can be interpreted that there is an inherent contradiction within medical practice and in the NHS Fife procedures used in the treatment of heart attacks. The focus is on treating people quickly and effectively in one situation which results in good outcomes - i.e. angioplasty. The efficiency at this part of the patient's heart attack journey is crucial for alleviating further damage to the heart. The procedure, however, can serve as a potential barrier and be seen to undermine engagement with other parts of the cardiac rehabilitation service, namely completing the goals set within the Heart Manual and engagement at Phase 3. As a consequence, staff often mentioned having to 'sell' the benefits of cardiac rehabilitation to patients, suggesting that in many instances this was a challenge.

Staff highlighted that patients who did not engage with Phase 3 CR may not fully understand the benefits of cardiac rehabilitation. Perhaps in conjunction with lack of information about CR, and feeling 'fixed' this may dissuade them further. Fay, Veronica and Joan outlined that CR ought to be 'sold' more persuasively, not as an optional extra but as part of a patient's treatment strategy. This, in turn, in staff's opinion, would provide patients with better knowledge and understanding of their condition and optimise recovery from their heart attack,

> **Fay:** "I think we have to say to them this is your next stage of rehab. This is what you're going to do because at Phase 3 that's the first time they have a chance to opt out"

> **Veronica:** "I think it needs to be seen in Phase 1 that cardiac rehab is part of their treatment and it should be sold to them as part of their treatment and part of their recovery as opposed to you can do it or you can't. I think if it's sold to them as part of their treatment and part of their recovery then patients will embrace Phase 2 and attend Phase 3 and go on to Phase 4 etc. etc. and hopefully stay healthy for longer.

> **Joan:** "I think a lot depends on how it's sold to them. A lot of people just think exercise and lycra and stuff like that. If you can get over their misconceptions

> and get them along to see if they like it, then that's a bonus. I do think it should be sold to them as part of their treatment, part of their recovery that they do Phase 3 and Phase 4 but not everybody does that. I think when they go to see their GP's they should be encouraging them and saying 'this is part of your treatment.'"

On the other hand, 'selling' CR is problematic in a number of ways. Firstly, it does not address that some of the barriers to engagement with CR at Phase 3 may be outwith the control of patients. For instance, organisational factors (including delays in referrals, lack of information and longer waiting times for Phase 3) highlighted in Chapter 6 and exemplified in the staff responses above undoubtedly impacted on some of the participants in this research. The 'selling' of CR is in direct opposition to patients asserting their own choices in their recovery process and this de-contextualises the recovery process, which takes place within the situated lives of those who have sustained a heart attack; and other factors may be more pressing than attending CR. In previous studies of lay perspectives of heart disease the majority of participants were highly aware of the orthodoxies surrounding the prevention of heart disease and were not 'victims of their own ignorance' (Davison et al., 1992: 676). 'Selling' CR more strongly in principle may increase engagement for some patients, but by the time Phase 3 of the programme has occurred, for some participants in this study, 'normal' life was resuming with all its antecedent responsibilities and duties such as work and/or caring responsibilities. That was not to say that participants were not influenced by the information provided from CR regarding lifestyle changes. Indeed, as stated in Chapter 5, the majority of participants in this research did alter aspects of their lifestyles. As has been stated previously, one of the main focuses of cardiac rehabilitation is on the reduction of classic risk behaviours which contribute to heart attacks. Mhairi and Dawn outlined the importance of engaging with CR for encouraging lifestyle changes,

> **Mhairi** "we have evidence that it's cost effective, that it prevents further events and it prevents readmissions and that's national audit, that's not just local audit but our local audit backs that up, you know, the lifestyle changes that people make. I mean, that's what cardiac rehab is about. It's about lifestyle change. It's actually about behavioural change because 52% of

> further events are prevented due to change in lifestyle and that's what cardiac rehab is about."
>
> **Dawn** "[rehab] is an opportunity for them really to learn. You know, it's a second chance in a lot of cases for them to look at their lifestyle, the whole thing and adopt a more healthier life, you know, exercise and diet. And smoking obviously. That's a big no no. Often it's a wake-up call for people and really they have got a second chance, type of thing. So, it's up to them whether they want to take it. Everybody's different in how they respond to that and take on that challenge, I think."

As stated previously, the individually focused nature of cardiac rehabilitation (from Phase 1 to Phase 4) reinforces a behavioural model of health which views behaviours as entirely a matter of personal choice. One of the aims of this research was to emphasise that greater appreciation is required of the ways in which health and ill health are influenced, produced and reproduced in place and how these (in conjunction with gendered experiences of heart attack and recovery) can impact on and create differential barriers to engagement, resulting in non-attendance. Much of the evidence to date regarding cardiac rehabilitation non-attendance has sought to identify individual factors, particularly psychological factors for lack of engagement. These theories underscore that if participants work in partnership with cardiac health care professionals and adopt behavioural changes then their unhealthy behaviours can be reduced and their future health improved. There is evidence aplenty to attest to this; however, it is not just the lack of 'selling' CR which is implicated in non-engagement, although it plays a part. Other factors, often overlooked in CR are implicated in the challenge of getting 'under-represented' patients through the door. For example, one staff member outlined that "we need to look at the ways in which we actually get people into the programmes at [Phase 3]" suggesting that other barriers exist which are not solely related to individual factors. Staff were aware of multiple barriers to attendance which could impact on different patients' ability to attend. For example, Dawn and Alice outlined this in their following points,

> **Dawn:** "The particular reasons for not engaging are a big question. Is it because they're back to work? Is it because there're no classes in the

> evenings? Is it because there's nothing locally for them? Are they carers or maybe there are other issues they've got. If they're in that younger age group and they've got family then they're maybe too busy ferrying the kids around and whatever else. So their priority is not their own health."
>
> **Alice:** "I think if people have got other things on their mind, if they've got family worries, these kinds of things, they always take priority over health. Your health seems to be last when you've got other issues on board and a lot of people have."

These will be discussed in more detail below but they mirror those recognised and elucidated by participants in Chapter 6.

*Infrastructural barriers*

Factors such as transport issues, timings and locations of classes and the composition of classes were cited by staff (as well as participants) as barriers to engagement. For example, transport and its associated costs were highlighted and there was acknowledgement that some patients may not have a lot of money. They may not own cars and the journey to rehab may be convoluted and time consuming resulting in lack of attendance. Veronica outlined that,

> **Veronica:** "the more barriers that there are or what they [patients] perceive as being a barrier then the less chance they'll attend. If you've got to get three or four buses and it's going to cost them fifteen, twenty pounds. It's a lot of money for some people and I think we tend to forget sometimes"

The timings of classes, although classes had been extended and provided at different times, impacted disproportionately on younger, working patients, and those who worked long hours, as well as those with caring responsibilities. It has been stated that the limited capacity and the inflexibility of the current CR model can impede access and ability to attend (Cooper et al., 2002; Clark et al., 2002; Tod et al., 2001; Pell & Morrison, 1998) and

in this research, evidence from both participants and staff has highlighted elements of this in NHS Fife.

*Composition of Phase 3 classes*

Staff mentioned that the demographic profile of heart attack patients and those attending CR was changing. Fay highlighted that they were seeing "so many more younger people" and this may be in part, due to patients seeking help more promptly and quicker interventions. However, although younger patients were attending CR classes, the majority of classes in Fife were still populated predominantly by older, retired males. Dawn addressed this by stating,

> **Dawn:** "when you go to Phase 3 classes now, the majority of them are male dominated. There's one or two women but the majority of them are male. A lot of them have taken early retirement.

Participants in this study often highlighted that the classes 'were not for them' as well as perceiving that they would have little in common with others attending the classes. A small number of participants in this research did state that attending the classes with older people made them feel awkward and discouraged attendance and staff were certainly aware of this. Fay and Veronica outlined this,

> **Fay**: "younger people don't want to come to class with older people. They don't. They don't want to feel this disease has made them old."

> **Veronica:** "there's a lot of younger people coming through who are not attending because they don't want to be in classes with older people. I think we have to look at ways to attract the younger people and make it more attractive to them. I think the problem is they've had their intervention, they're back at work very quickly and they feel fine so a lot of them don't feel the need to come to cardiac rehab."

For other staff members, references to other groups of cardiac patients less likely to attend included "women, ethnic minorities, disabled and the working population" (Mhairi) and particularly for women Mhairi highlighted some of the barriers which may combine and result in lack of engagement,

> **Mhairi:** "women tend to present later with heart disease, about ten years later. They've often had small events, they're more complicated. They've more symptoms. Women are also very good at encouraging their husbands, spouses, partners to take part but they're not so good at doing it themselves. I think many of them are caring for grandchildren. Many of them think it's the exercise, that that is what CR is going to be. It's still male dominated. There's all these things going on with women."

It has been shown so far that there are number of organisational, communication and infrastructure barriers to engagement with CR which can impact engagement and attendance at CR Phase 3 which staff (and participants) have identified. The forthcoming sections of this chapter will focus on differences which staff have identified amongst populations (and places) in Fife which are perceived to create different responses to cardiac rehabilitation.

*Situating patients' recovery in place: contrasts between 'deprived' and 'affluent'*

As stated in previous chapters, health and health behaviours (including lifestyles) and also CR engagement are influenced in different ways by participants' social contexts. It has been highlighted in Chapter 6 that there were different responses to CR for those from 'deprived' and 'affluent' areas in Fife. Staff were asked if they thought there were differences between places in Fife which were 'healthy' and 'unhealthy' and, additionally, contrasts in the characteristics of patients who did attend and those who did not. From their own situated knowledge and awareness of Fife, staff were able to name areas they perceived to be 'deprived' and those that they perceived to be 'affluent'. The former included many de-industrialised areas which concurred with those that participants' highlighted in the previous chapter. Staff suggestions included,

**Matthew:** "Methil, Cardenden and out to the West. Parts of Kirkcaldy too"

**Fay:** "I would say Glenrothes. Every referral I see seems to be from Glenrothes"

**Alice:** "The likes of Cardenden, Bowhill. There's also Lochgelly which is another deprived area, former mining village"

Particular 'affluent' locations were emphasised which also chimed with the participants' suggestions, such as St Andrews, Cupar and villages in the East Neuk. Similar to participants' views of these places, there were differences in how these areas were conceptualised regarding whether or not they were perceived as being 'healthy' or 'unhealthy' places. Some staff were reluctant to make generalisations about area characteristics using these 'unhealthy/deprived' or 'healthy/affluent' oppositions and one staff member suggested that "you'll have affluent pockets in deprived areas so I don't think you can call one area totally deprived or totally unhealthy" (Mhairi). Nevertheless, staff articulated that there were a number of differences between 'deprived' and 'affluent' areas which segued into discussions about describing patients from these different areas and their engagement (or not) with cardiac rehabilitation. Those from more healthy areas were perceived as more likely to live in areas of affluence, or areas perceived to be affluent. There was the impression that they were more likely to be better educated, take more responsibility for their health and be more compliant with health messages. Veronica exemplified these perspectives by saying that,

**Veronica:** "I think people in affluent areas will go and see about their health. If they get something wrong with themselves, if they get a pain, they will generally go and see about it because they feel that is something they should do. There's an expectation of keeping themselves healthy. Perhaps they work in a really good environment as well and there're healthy people round them and that influences how they feel about themselves. They will be influenced to exercise, eat well etc."

Conversely, perceptions of those from more deprived areas differed. Staff indicated that patients from deprived areas were often more difficult to engage with, showed less awareness of their heart health problems and seemed to take less responsibility for their health. Laura and Dawn suggested that,

> **Laura** "for the likes of Cardenden, Bowhill areas, I've never met so many ostriches sticking their head in the sand and thinking 'ignore it and it will go away.' I don't know where they get that from. You know 'that's nothing to do with me' But it's their health! But it's almost like it's somebody else's problem. It's not mine. I don't have to deal with it. It'll happen to someone else. But then you get the stories of 'my granda lived til he was 80 and he smoked and drank and there was nothing wrong with him!' And you're like but 'maybe he would've lived longer if he hadn't done those things.' But then they'll turn round and say to you, 'I'm seventy odd now and I'm going to enjoy myself! There's a lot more of that attitude down here"

> **Dawn: "**I think it's very much to do with their own perception of what's important to them. I think it's how they value their own health and if you're in certain areas then your mainstay in some areas is really how to survive, they're on a breadline type of existence. But if you're on the breadline or whatever, then unless something's really at your doorstep then it's not a priority really for you."

There was acknowledgement by staff that life circumstances could greatly impact on recovery more generally as well as on the ability to engage with CR. Staff particularly highlighted differences in ways of responding to health concerns, namely heart attack symptoms and sensations and differences in ways of enacting and maintaining changes, both in terms of health behaviours and including attendance at CR classes. Mhairi and Matthew highlighted these points,

> **Mhairi:** "the heath inequalities thing, well, these people are just difficult to actually take some responsibility for their health. I think it's all about health beliefs and I think poverty plays a huge part. Unemployment and you know, people with very low income, maybe they would like to be a bit more health

> conscious. There's that whole thing that goes on with poverty. They're mental health suffers and their lives are chaotic sometimes. Their lives are absolutely chaotic. So, I think you need to get to the root causes of these health inequalities. We need to look at what the real issues are"

> **Matthew:** "there are patients who put up with, probably because of not understanding what they're experiencing, put up with a lot. Whereas the better informed, shall we say, will seek help much sooner, will do things to influence outcomes, will try to understand their illness, will badger their doctor. They'll get seen if they think they need seen in hospital and so on. Whereas a lot of folk will think, because they've seen, they think it's normal. Because we see a lot of people from these areas and they sit on symptoms for ages. Don't respond to them. So maybe it's something in the way they're brought up and their background. I reckon they've seen their relatives behave like that and it's ingrained in them and they just think it's par for the course"

Underpinning staff perspectives were the ways in which these perceived differences appeared to distinguish and set people apart in some areas, compared to those from other areas. As stated in the previous chapter, research has suggested that those who are living in more disadvantaged conditions may lack a positive concept of health. There may be an expectation of poorer health (indeed some participants in this study did outline that they 'expected' diseases, such as cancer or heart problems). In addition, there may be a feeling, for some, of having a lack of control over health or taking health for granted until the heart attack occurred, for example. In turn, these may combine and reduce the proclivity to take preventive action (Hunt et al., 2000; Backett & Davison, 1995; Davison, 1992; Davison et al., 1989). Staff were aware of specific contextual differences which existed between different areas and populations in Fife. There was recognition that these contexts framed patients' experiences and resulted in different effects on health, ill health and recovery. Staff mentioned that there appeared to be a high degree of stoicism and macho type behaviours (denial of pain and discomfort, reluctance to attend CR, preservation of 'the self') and these characteristics could act as a buffer to cope with adversity and to protect independence which is in stark contrast to disclosing vulnerability. Interestingly, these perceptions seemed to suggest a gendered perception

of CR non-attenders and perhaps related more to male patients. This staff perception was likely influenced because in many cases, they have treated and provided CR to more men during their professional lives, compared to women. Veronica, Matthew and Dawn outlined that,

> **Veronica:** "having known a lot of miners in the past, there is a mindset. By talking about health it's like seen as some kind of, not a weakness but it's not seen as a macho type thing to do especially with the older generation. The younger men maybe find it easier to talk about their health, but the older men, particularly from mining areas, it's seen as being a weakness. They won't talk about their health. They put up with a lot of pain. There are definitely some traits there where some patients will just put up with things until perhaps it's too late or other things have been made worse for them and they just think that's their lot in life."

> **Matthew:** "traditionally Fife has had a high prevalence of coronary disease and there was an impression there was a blanket phenomenon across Fife but we know there are areas where it's much worse and certainly things like deprivation and the influence of risk factors accounts for quite a lot of what we see. I think the Fife population, the true Fifers are incredibly stoical and phlegmatic. They'll put up with a helluva lot and often they don't realise what they've got or often think that what they've got is par for the course."

> **Dawn:** "well a lot don't attend. They put up with a lot of pain. They put up with a lot of things that maybe a younger man from a different area or different culture wouldn't. There are definitely some traits where patients will just put up with things until perhaps it's too late or they just think that's their lot in life."

Veronica, Matthew and Dawn's accounts indicated that ill health was influenced by a variety of factors (place, social position, gender, risk factors and attitude) which contributed to the ways patients behaved and responded to their heart attack. Staff outlined that there were differences in lifestyles and behaviour of those from different social contexts which concurs with findings presented in Chapter 6. The following extracts

from staff highlighted some of the ways that the health and ill health of heart attack patients may be shaped by the types of communities where they live. The following examples referred to areas characterised as 'deprived' and 'unhealthy' by staff participants and included references to both the physical environment as well as poverty and deprivation and other aspects of 'lifestyle reproduction' which were outlined by participants in Chapter 6. These different habitus can in turn, produce lifestyles and associated 'tastes' and behaviours. Alice and Fay highlighted these in the following ways,

> **Alice:** "These places, these communities when you look around at their shops and things, there's three bakers, there's things like the pubs, Chinese take-aways. These are all kind of central to the community, rather than more healthy things. It's also [about] how they've been brought up and attitudes to how they've been brought up. If they've lived that kind of life with their parents, it seems to get passed on as well."

> **Fay:** "I think it comes down to money and also depending on where you've been brought up, the type of job that you've done. Some people are brought up on McDonald's and fast food and they then pass that on. I do think that. People don't cook anymore. I think the fact that people say 'we're too busy' is just an excuse. You make a choice but it's difficult for some people who have never been shown that choice, then to make a choice. The younger people that we're seeing now they're smoking and the diets they have, they're grossly overweight and they don't exercise. I do think it must be the way that they've been brought up and the values they've been shown as children. I know that sounds quite judgemental.

Staff highlighted complex and multi-faceted influences impacting on the lives (and lifestyles) of patients in different areas but they often did tend to view lifestyles and behaviour as ultimately under individual control. Of course, individual agency is important and despite staff being aware of wider structural factors contributing to health, ill health and recovery, the prevailing bio-medical conceptualisation for health improvement reinforced this behavioural model of health. The appreciation that localised social contexts and other determinants of health, such as gender and age, can combine to

influence health and health behaviours and produce differential barriers to engagement were stated. Staff were, in part, aware of some of these but this knowledge is not often included within CR provision,

> **Matthew:** "you've only got to look at the fact that in those places [de-industrialised places] the extraordinary thing is despite deprivation, unemployment and so forth [and] low incomes, people still manage to smoke, have incredibly unhealthy lifestyles, get obese and so on and so forth. That's still a big issue, I think. That happens in those areas, not exclusively, but I mean, it is a particular problem, we still see those sorts of risk factors. [They're] very prevalent there which you wouldn't see say in St Andrews.

Staff were aware that the heart attack experience was a frightening and shocking occurrence for many people and that patients' reactions and responses to heart attack were not straightforward. Mhairi highlighted that,

> **Mhairi:** "with cardiac rehab it's not just physical but psychological. There's a whole mindset, getting their heads round [the heart attack] and genuinely they want to make a full recovery. Get on with a normal life and they want to make sure it doesn't happen again. After the event, they've had a huge fright so they're very committed but their motivation goes in cycles, waxes and wanes."

Understanding the largely epidemiological basis for heart attack and benefits of cardiac rehabilitation is often juxtaposed with the challenge of ensuring patients' compliance with CR (Clark, et al., 2004). However, the situated reality of many patients' lives, (which may give the impression of not appearing to 'value' their health by not complying with health messages or attending CR for example), are more complex and paradoxical (Clark et al., 2007). This framework for understanding the causative mechanisms for lack of engagement with cardiac rehabilitation, for example, must situate patients' experiences of their heart attack and recovery in place by better understanding patients' needs and individual challenges relative to their recovery. For example, Veronica highlighted this

contradiction with regards to changing 'risky' behaviours using the example of stopping smoking,

> **Veronica**: "just take smoking for example. There is a pressure to stay stopped. They [the patient] know they have to 'cause they've had [a heart attack] and they've had the professionals telling then this is what they should do and they know themselves this is what they should do and they're getting messages constantly that they have to stop smoking. But they're living in a home where their wife, their son, their daughter, all their friends smoke and that's their social network. That's their friends. That's their norm. How do they break through that? I mean it can be done but it's very, very difficult and if they don't view health as being important to them, then they just succumb"

This suggests that lifestyles are embedded in and through place. Stopping smoking, for example, may indeed improve health and reduce future heart attacks but the situated nature of patients' lives (and lifestyles) often mean that behaviours are intertwined and constitute part of patients' identities. These and other life experiences occurring during the recovery period can exert powerful influences and although patients may have the desire and motivation to change certain lifestyle behaviours, their habitus is a powerful influence. Bourdieu described the habitus as the world in which the individual lives and which includes their everyday habits, their working environment etc. This habitus is formed within the structural conditions in which people are located (neighbourhood contexts for example and all that these entail), in addition to other determinants such as gender, age and social position. It is expressed in the ways people conduct themselves, for example their lifestyles and preferences. Therefore, participants who belong to social groups are distinguishable from each other, not only by possessing 'healthiness' or 'unhealthiness' but through their consumption patterns (for 'healthier' or 'unhealthier' things) which can also include CR attendance. What this means for cardiac rehabilitation is that there is a continuing tension between what participants 'know' about their health and how this is or is not enacted into behavioural and lifestyle changes which include attendance at rehabilitation. From staff perspectives, these may be paradoxical and largely contradictory to the dominant behavioural health model which cardiac rehabilitation adopts to improve patient health. Patients then "may act in certain ways,

directed towards certain ends, without being conscious of these ends" (Bourdieu, 1990: 9-10). In the case of non-attenders, their refusal to engage may be construed by staff as an act of resistance but this perspective fails to account for myriad other influences involved. It is worth highlighting that social groups may differently marshal practical and social resources needed to use services. It has been stated in this chapter and in Chapter 6 that practical and social considerations are important for choosing or being able to attend cardiac rehabilitation. It has also been acknowledged by staff that these issues may not be at the forefront of organisational consideration when trying to account for and explain patient non-attendance, nor feature highly enough when service changes are being adopted. This then can suggest a lack of alignment (and understanding) between what the priorities and values are for the cardiac rehabilitation service, contrasted with those of patients (Dixon-Woods et al., 2006). This is despite the notion of 'individualising' CR. The contradictions between staff's professional 'gaze' and understanding of heart health and recovery from heart attack, coupled with their own understanding of places and people in Fife and the complexities and uncertainties which a heart attack produces for patients, raised tensions and frustrations for staff in different ways. The next part of this chapter will discuss some of the ways staff suggested that attendance and engagement with CR could be improved.

## Improving engagement at CR: staff perspectives

It was recognised by staff that there were barriers which operated in different ways affecting patients' ability to fully engage with CR. In particular, staff recognised that as well as the service changes which were taking place, misunderstanding of what CR entails was evident from participants' perspectives as well as other health care professionals. Both Alice Laura and Matthew stated that,

> **Alice:** "I would make sure that absolutely everybody knew what rehab was both staff and patients. So it would be everybody from the GPs to the [Heart Manual] facilitators to anybody that cares for someone who has heart disease."

> **Laura:** "the nurses tell [patients] about rehab but if the nurses had a greater understanding and if they were brought in and we did classes with them and they understood what the rehab process or the exercises were, maybe they'd be able to push it further."

> **Matthew:** "maybe some of our failure is not explaining [rehab] well enough at the outset and perhaps not helping them enough to at least give it a go. At least turn up once or twice and see if it's for them or not."

Communication and understanding about CR were identified as a gap for patients and healthcare staff alike. For those staff interviewed, ways to improve understanding about CR and to make it more accessible included suggestions of increasing the number of classes, increasing the number of locations where classes were held and having classes at different times to cater for populations, such as younger, working aged patients who had been identified as an emergent group. Staff mentioned separate classes for men and women. Some patients who attended classes brought family members with them to classes and staff stated that they encouraged this practice and highlighted that they would like to actively involve family members in patients' recovery in all CR phases. It was recognised that the linear, four phased 'one size fits all' model was restrictive and not flexible enough to be individualised to meet patients' needs. Mhairi highlighted,

> **Mhairi**: "we maybe need to deliver different types of programmes in different areas and we really need to start looking at the whole thing and not just deliver uniform programmes, regardless of where the patient lives. And be truly individualised but again, that would take more resources than what we have in place"

Staff recognised that the CR model was not perfect and they recognised that barriers to attendance were complex and that place, gender and age factors contributed to these barriers in different ways. However, CR services must better acknowledge and include patients' understandings in order to help contextualise the experience of heart attack and recovery for people's real lives. Understanding how the habitus of patients contributes to differences in health experiences, responses and behaviours requires the acknowledgement of place and the situated-ness of patients' lives over and above the dichotomies of 'deprived/unhealthy' or 'affluent/healthy.' Staff were aware that viewing people and places in this light can form generalisations but often health services use these types of administrative data to organise services, making assumptions about populations and 'need.' Nevertheless, it was recognised that financial constraints were stifling the ability to increase the service in various ways and this lack of resource had impacted on being able to perform "much more intensive focused work" (Mhairi) in certain areas. The place based understanding staff had of people and places in Fife because they lived and worked there was an advantage and even within the confines of the CR model, staff outlined that they used this knowledge in some subtle and more obvious ways to encourage understanding about CR and participation. Overall, staff agreed that the crucial factor in providing a good CR service which is accessible and equitable would be in understanding patients better because, as Veronica stated,

> **Veronica**: "a patient just doesn't fit in a box and you don't want to make assumptions about someone. We've really got to understand patients' needs and be patient centred."

## Conclusion

This chapter has presented findings from interviews with staff participants involved in cardiac rehabilitation. Staff highlighted that there were benefits for patients engaging with cardiac rehabilitation, but they also recognised that there were barriers to engagement. These barriers included organisational factors which were particularly acute during the period when staff were being interviewed due to service changes being adopted. Communication and information barriers were identified which could contribute to patients not attending CR. Particularly recognised was the impact of cardiac interventions, such as angioplasty which staff perceived patients could conceive of as being 'fixed'. Participants in this study also outlined these procedures and a tendency to feel 'fixed.' Therefore, staff believed that 'selling' CR was needed in different ways for different patient groups and that this could be a challenge, particularly if patients felt 'fixed'. Staff outlined that CR should be promoted and 'sold' as an intrinsic part of patients' treatment and recovery, rather than as an option. However, it was important to recognise the contextual and situated nature of patients' lives and that their recovery from heart attack (including attending CR) is influenced, produced and reproduced in place and that gender and age factors can differentially impact on engagement. Differences were outlined between attenders and non-attenders relative to deprived/affluent places and different influences for health and ill health, and barriers to engagement were identified for those from different places. Staff highlighted that patients' life circumstances would impact on how they responded to health and ill health. Particular attitudes and beliefs about patients (which may be gendered) highlighted and demonstrated some differences between people and places. These differences were observed and articulated by staff as related to differences in patients' behaviours and attitudes. CR is underpinned by a bio-medical focus on lifestyle risk reduction but it is important to acknowledge that lifestyles are produced in place, and are to participants, more than a collection of behaviours. These form part of their identities. Reducing or stopping risk factors may be viewed by staff as best for improving heart health, but the impact for patients could mean a disruption to their social lives and social networks, and ultimately a further disruption to the self. Finally, staff were aware of the limitations of

the service and offered some ways to account for differences between place and people, as well as the need to be aware that the model can be restrictive and inflexible for some patients, which may, in turn, impact on engagement.

The next chapter will discuss the main findings of the study which have been presented so far. This chapter will also offer an opportunity to reflect on various aspects of the study, including limitations and ideas for future research.

# Chapter 8: Discussion and Conclusion

This chapter provides an opportunity to reflect on the study and draw out the main findings presented in the previous chapters to show the contribution this research has made to understanding men's and women's experiences of their heart attack and recovery in place. This chapter will also consider the limitations of the research, as well as the implications of the research and suggest avenues for future research.

As stated previously, this research was funded by NHS Fife Managed Clinical Network (MCN) for Coronary Heart Disease in order to better understand the geographical health variations and health inequalities across NHS Fife, particularly in relation to coronary heart disease. Working with the NHS during the preliminary stages highlighted areas for research including a focus on cardiac rehabilitation which had been identified as a clinical priority area for NHS Fife, but one in which geographical health inequalities and health variations were poorly understood. With input from NHS staff working within the broad area of coronary heart disease, and cardiac rehabilitation in particular, the research narrowed to focus on patient's situated experiences of heart attack and recovery (including cardiac rehabilitation).

This study used multi-methods to address the main aim of understanding the ways in which place influences and shapes men's and women's experiences of their heart attack and recovery in Fife. In order to address this aim the research questions posed were:

- What observations can be drawn about coronary heart disease outcomes associated with different geographical areas in Fife?

- How do men and women construct their experiences of heart attack?

- What roles do place and gender (and other determinants, such as age) play regarding experiences of heart attack and engagement with cardiac rehabilitation?

- What barriers to engagement with cardiac rehabilitation exist for participants from different areas across Fife?

- What barriers to engagement have cardiac rehabilitation staff identified and additionally, to what extent do they perceive place based factors have a bearing on engagement?

In order to answer these different, but interconnected research questions related to exploring the complex and co-created interactions between place, gender and health, the research transitioned from understanding place as mainly the geography of health variations (using quantitative methods) through to understanding the geography of experience of heart attack and recovery *in place* (using qualitative methods).

The findings will be divided into a number of different sections. The next section will highlight the main findings which relate to the first research question. The subsequent sections will highlight the main findings related to men's and women's experiences of their heart attack and recovery in place (including cardiac rehabilitation) which answer the remaining research questions and the contribution this study has made to knowledge within health geography.

## The main findings:

*Geography of health variations and accounting for place*

Understanding the geography of health variations in place required the use of methods which could quantify differences in coronary heart disease outcomes by geographical locations across Fife. It was hypothesised that certain neighbourhood characteristics would have a bearing on the health of contemporary populations in Fife, over and above individual characteristics. Fife, where this research was situated, was an interesting location to study as there were observed contrasts within the region, particularly related to health outcomes, most notably observed between areas of wealth (north east of Fife) and areas of poverty and deprivation (central and west Fife). The decline of many of Fife's

industries, particularly mining and manufacturing, were additionally hypothesised to have helped to contribute to changes in the social, economic and physical environments of these areas through the processes of de-industrialisation, which can combine to create conditions that lead to poorer health and mortality (Riva et al., 2011; Walsh et al., 2010; Mitchell et al., 2000; Phillimore and Morris, 1991; Phillimore, 1993; Phillimore et al., 1994).

What observations were elicited about coronary heart disease outcomes associated with different geographical areas in Fife? Influenced by work conducted by Beatty and Fothergill (1996) and Garrett et al., (2006) the place typologies developed by Garrett et al., (2006) influenced the characterisation of Fife's contrasting social environments (utilising quantitative methods) into - 'mining deprived', 'non-mining deprived', and 'non-mining affluent' areas (see map 1 in Chapter 4). Extending these typologies (which used Census data from 1981) and combining these with individual level coronary heart disease and deprivation measure outcomes allowed multi-level modelling analyses to be performed which helped to establish whether observed variations in health (in this case coronary heart disease mortality) arose due to the composition of an area (e.g. different sorts of people living in different types of areas) or whether contextual effects were more likely (e.g. because places differ in terms of different attributes). These types of analyses allowed both sets of data (individuals and places) to be brought together (Gatrell & Elliot, 2009; Gatrell, et al., 2004; Macintyre, et al., 2002; Pickett & Pearl, 2001; Macintyre, 1994). By controlling for deprivation in the multi-level analyses used in this study, the effects of the characteristics of place on health for different 'industrial areas' can be shown (Chapter 4). The results from these analyses showed that rates of CHD mortality for men and women were worse in areas which were predominantly mining (energy and water) or manufacturing. Although the rates of CHD mortality diminished across these 'industrial areas' during the subsequent Census years (1991 and 2001), the rates were slower to improve in both manufacturing areas and mining areas as these types of areas still showed worse health outcomes for coronary heart disease mortality compared to agricultural areas for example. These results suggested that it was not solely deprivation which contributed to these CHD mortality variations but other contextual, place based factors also raised the risk of mortality from CHD. Therefore, accounting for place in this

way showed that there was something distinctive about de-industrialised areas, particularly mining and manufacturing type areas, which can be deleterious to health. This novel quantitative research design for understanding variations in CHD outcomes and the analyses which followed, contributed to the understanding of geographical health variations and neighbourhood effects on health in Scotland (and Fife) by characterising place through developing 'industrial area' typologies combined with CHD health outcomes. Using quantitative methods to explain place effects in relation to health can certainly show correlations between people and places, but interpretations of how and why characteristics of place can support or constrain health for residents (Macintrye et al., 1993) cannot be achieved using these methods alone. Therefore, combining the quantitative results with qualitative methods, including historical geographies of place and participant accounts of place allowed the researcher a) to provide a more coherent context for why Fife was an important place within which to study geographies of health, and b) to provide the rationale and context for the ways in which geographical and socio-historical characteristics of places in Fife can shape health for men and womenwho have sustained a heart attack.

*Men's and women's experiences of heart attack and recovery*

Fifty men and women who had sustained a heart attack were recruited and interviewed in their homes across Fife during the fieldwork period in order to gain their perspectives about heart attack experiences and recovery (including cardiac rehabilitation engagement and non-engagement) in place. It has been argued that there is often a prevailing focus on biomedical and epidemiological evidence for understanding CHD (Wiles, 1998; White, 1999) and this study sought to discover 'lay perspectives' of heart attack experiences and recovery. These can counteract the often reductionist notions about what health experiences are (Popay et al., 2003; Blaxter in Douglas et al., (eds), 2007). It was highlighted in Chapter 2 that men's and women's experiences of heart attack are often under-researched (Emslie et al., 2001; O'Donnell, et al., 2004; White et al., 2007, Jackson et al., 2000; Albarran et al., 2007). This thesis sought to provide further evidence of the lived experiences of heart attack and recovery for men and women in Fife. In addition, eight NHS Fife cardiac rehabilitation staff were interviewed who were involved in the

design, implementation and provision of cardiac rehabilitation services in NHS Fife. As this PhD was undertaken in conjunction with NHS Fife (who fully funded the research) cardiac rehabilitation had been identified as a clinical priority area for NHS Fife. Cardiac rehabilitation in Fife showed a number of geographical variations and differences in attendance and engagement with its services. In addition, under-represented populations who did not attend were identified (both in national and local, – i.e. Fife, data). Therefore, gathering views from staff about their experiences (also an under-researched area) of working with different population groups across NHS Fife who had sustained a heart attack was an important part of this study and one which could illuminate professional perspectives about heart attack experiences, but also engagement issues with CR. The forthcoming sections will highlight the main findings from the qualitative phases of the research concerned with 1) men's and women's experiences of their heart attack and recovery and 2) staff perspectives about recovery from heart attack and barriers to engagement with cardiac rehabilitation

It has been outlined in Chapters 2 and 5 that there are different social and medical constructions which exist for the heart and the body. It is therefore important to pay attention to gender differences of heart attack experiences. Gender identities are produced in and through place (Massey, 1994) and these cannot easily be disconnected because social practices, interactions and ways of thinking about and representing place and gender are interconnected and co-constituted (McDowell and Sharp, 1997). Paying attention to how men and women talk about their heart attack and recovery is important to understand so that the complexities of their experiences can be gathered and contextualised (Johansson, et al., 2003). Within this thesis, there were commonalities in some of the men's and women's accounts of heart attack experiences. In particular, the heart attack often provoked powerful reactions and produced a great deal of uncertainty, anxiety and confusion (Kleinman, 1998; Turner, 1996; Charmaz, 1995). This is significant because the sudden onset and surprising nature of a serious condition can "assault the body and threaten the integrity of self" (Charmaz, 1995:657) and can have consequences for making sense of the heart attack, coming to terms with it, and responses to it. Understanding how and why the heart attack had occurred featured heavily throughout the participant interviews. This sense making took multiple forms and included themes

related to 'identifying symptoms and sensations', 'understanding cause' and understanding 'lifestyle.'

Attempts to understand sensations and symptoms leading up to the heart attack over weeks and months, as well as when the heart attack occurred, were identified. Many men and women in this research indicated that they had experienced symptoms and sensations prior to the heart attack but these were often downplayed, ignored or denied. For women and men, their interpretations were often couched within wider social and medical constructions of heart disease, which significantly portray heart attacks as a 'male' disease despite evidence to the contrary (BHF, 2012). Due to the prevalent gendered 'male' construction of heart disease, both health professionals and lay perspectives often collectively view women as 'low risk' and not as likely 'coronary candidates' (Lockyer and Bury, 2002; Davison, et al., 1991; Emslie et al., 2001). However this explanation may have led to uncertainties for women (in different ways to men) in appraising signs and symptoms and cast doubts about equating these as heart attack 'warning signs.' In some cases, this occurred even when a heart attack had been previously experienced. Men, in this research, also demonstrated uncertainty about signs and symptoms about their heart attack yet, despite the commonly held social constructions of men being more likely 'coronary candidates', men did not align the stereotypical 'coronary candidate' image to their own perception of 'risk' of sustaining a heart attack (Clark 2003; Brink et al., 2002). The majority of men did not believe they were at risk for having a heart attack despite many of them displaying 'vulnerabilities' relative to their age, social position and lifestyle factors (which are all contributory factors for coronary heart disease).

Understandings about what caused the heart attack were discussed extensively throughout the interviews and men and women demonstrated numerous uncertainties and contradictions around cause. Attributing 'cause' was often based on multiple contributory factors, including lifestyle factors and, for some participants, the potential of 'inheriting' susceptibility towards heart problems. Participants made sense of 'cause' in various ways. Some men used mechanistic and mechanical terms to describe how their bodies had 'broken down' and these ways of describing the body suggested that there

may be a culturally preferred narrative, enacted most commonly by men with CHD influenced by medical and public health discourses (Curry and O'Brien, 2006). By contrast, women in this study did not describe their experiences using these types of mechanical metaphors.

Lifestyle factors, particularly smoking, stress and overwork were outlined but other examples were also provided such as poor diet, lack of exercise and high blood pressure/high cholesterol. These factors were often interpreted by participants in this research differently to the professional understandings of 'lifestyle.' It has been stated by Popay & Williams (1996) that these explanations create tensions between medical and lay concepts of causation but this 'lay epidemiology' (Frankel et al., 1991) of 'cause' was evident within this study as most participants tried to produce theories about their heart attack. In a small number of cases some of the male participants conceptualised the 'cause' to refer to the actual event. This can be problematic as some participants did not necessarily perceive their heart attack as a symptom of a chronic condition (Wiles & Kinmouth, 2001) and in turn this can have consequences for recovery. In addition, there was reluctance among some of the participants to wholly blame their behaviours for their heart attack and behaviours such as smoking, bad diet and lack of physical activity, were often embedded within being stressed, overworked or worrying about their family.

Stress was perceived as one of the 'causes' of heart attack in just under a third of participant accounts but the response to stress differed within men's and women's accounts. Men concentrated on their work related stress as contributing to their heart attack, whereas women related their stress to the combined stress of overwork and family commitments. Certainly participants' concepts of 'lifestyle' were broader and referred to wider aspects of their complex and situated life experiences than the definitions of lifestyle often used by professionals (Saltonstall, 1993; Pierret & Radley 1993; Popay et al., 1998). It was evident within this research that 'lifestyle' encompassed more than a collection of positive or negative health related behaviours. Lifestyle encompassed important meanings about who they were. Bourdieu's notion of habitus is important to reiterate because it provides a pivotal link between participants' lives and where their lives are situated (and what these incorporate). Participants' understanding

of lifestyles expressed something intrinsic about themselves as well as their particular preferences and tastes (including behaviours) which are influenced and embedded in and to their habitus (defined in this research through participants' different social locations). Understanding the situated and embedded nature of participants' experiences, within their day to day lives reflected that experiences of heart attack were complex and 'multi-factorial' (Popay et al., 2003). Men's and women's experiences of the heart attack (and recovery) depended on a number of factors - their social position, their social practices (lifestyles) particular to them, their social environments and other important influences (Frohlich et al., 2001). These elements had consequences for the ways in which men and women evaluated the ways their heart attack had impacted on their day to day lives.

The disruption and uncertainty surrounding the heart attack was evident for many of the participants and the consequences this had for their everyday lives outlined a variety of physical, emotional and psychological consequences. One of the most common side-effects of the heart attack was changes to participants' physical abilities and stamina which raised doubts about recovery. For some these were deeply troubling and had a detrimental effect on their sense of self. Physical symptoms after the heart attack often included fatigue, chest pain and breathlessness and these in turn had consequences for performing and participating in activities which had previously been taken for granted. Psychological and emotional consequences of the heart attack were highlighted and these included fear, anxiety and worry, and some participants experienced changes in their mood, appetite and sleeping patterns. In turn, these disruptions affected participants' (gendered) identities in a variety of different ways which included how they responded to taken for granted activities, duties, responsibilities and relationships post heart attack. For example, for some men in this research, their identities were often tied up with working and earning a living. Being seen to be capable of working was often associated with male gendered roles (McDowell and Sharp, 1999). Additionally, some men articulated alterations of their masculine role within the context of family life. They spoke of restrictions being imposed and increasing vigilance by wives/partners and this concurs with research conducted by Smith et al., (2007) and Johnson and Morse (1990) who argued that men can feel that their masculinity is being threatened when their traditional 'male' roles are taken over by wives or partners. For men who highlighted this,

there was a sense of frustration. For some women, independence in day to day tasks and activities often associated with their gendered role within the home, such as domestic tasks but also paid employment and care-taking duties, formed part of their identities. Some women articulated that their independence was compromised after their heart attack which impacted on their sense of self but also had an impact on their identities. White et al's (2007) study outlined that women often provided support to family members to counteract others' anxiety and they attempted to maintain their independence by resuming domestic tasks despite their ill health. This was evident in some of the women's account in this research. The impacts and consequences of the heart attack, in addition to feelings of worry and apprehension which some participants demonstrated, captured the uncertainty about whether (and when) their lives would get back to normal (Merleau-Ponty, 1996; Gadamer et al., 1996; Toombs, 1993).

For participants in this research, the heart attack may be a common tie but their experiences and reactions to it, as well as the impacts and consequences it has for their day to day lives were not homogenous. It is important to understand men's and women's constructions of heart attack in order to situate how gender can interact with other determinants which influence how the heart attack is experienced and responded to. Constructions of heart attack are influenced by a variety of sources, including the specific contexts within which men and women are situated and the corresponding locally constructed gendered roles and norms (Massey, 1994). These inter-connect and influence beliefs, attitudes and social practices and behaviours towards heart attack and recovery. Exploring how men and women constructed their heart attack experiences illuminated that the heart attack was a disruptive, surprising and uncertain event with a number of impacts and consequences which affected many aspects of participants' lives. Exploring the 'lived' experiences embedded these experiences in and to the wider contexts of participants' lives, which illustrated the complexities of sustaining a heart attack.

*Recovery in place*

It has been outlined that the heart attack had a number of different physical, emotional and psychological consequences for participants and caused disruption and raised

uncertainties about 'getting back to normal.' It has also been stated that there are complex interactions between gender, place and health. In this study, participants' experiences of heart attack and recovery were influenced, constructed and produced in and through place. Locating and characterising place differences were evident within participants' accounts. Participants articulated and signified socio-cultural, historical, economic and political aspects of place which can combine to create 'healthy' or 'unhealthy' places. Contrasts between areas in Fife were attested to by participants pertaining to being 'healthy' or 'unhealthy' characteristics of places. Firstly, areas which had not been blighted by de-industrialisation in Fife were most often described by participants as having health benefits. These areas appeared to possess more favourable attributes, and included physical, social and cultural features which would benefit health. These areas were more readily described as 'affluent' and the locations named were - St Andrews, Cupar and villages in the East Neuk. By contrast, when participants were asked which areas were 'unhealthy', those areas characterised as de-industrialised (e.g. 'mining deprived' or 'non-mining deprived') were highlighted and the examples given often 'mapped' onto de-industrialised areas in Fife. It has been argued by Clark (2003) that 'declined' places are often classified as 'deprived' or imagined as 'unhealthy' places. These perceptions can influence those who reside within these areas and also how they may be viewed in particular ways by those from outside. Participants articulated the consequences of decline and the lack of opportunities available and provided examples of social problems and anti-social behaviour (including alcohol and drug abuse) within their areas. For participants resident in these types of areas which were affected by the processes of de-industrialisation, they can begin to develop "positive or negative reputations" (Gesler in Kearns & Gesler eds. 1998: 17); and for individuals who lived in areas socially constructed and represented as 'unhealthy' or 'deprived' there is the possibility that the area and those who are resident therein can be stigmatised. 'Healthy' or 'unhealthy' places can influence the ways lives are lived. This was evidenced within participant accounts about situated lifestyles where local cultures, 'tastes' and behaviours combined to produce distinctions between people from socially contrasting places. Participants gave examples of interactive relationships between places and people and suggested that 'individual' lifestyles and ways of living contain a degree of 'lifestyle reproduction', which was passed down from generation to generation in the form of

ideas, norms, habits, customs and cultural tastes and preferences (Bourdieu, 1984). These elements, including attitudes, perceptions and beliefs about health and ill health, influenced in various ways how men and women experienced, reacted and responded to their heart attack and recovery. It was stated in Chapter 2 that individuals may choose their behaviours but it is likely they were predisposed by their habitus towards certain choices. These choices are inextricably linked to the social practices bounded in and to their own social environments and social circumstances (Frohlich et al., 2001). The creation and production of lifestyles therefore can be observed to vary between particular places (and people) and were also additionally structured by other determinants such as gender and age. Viewing experiences and responses to heart attack and recovery from a socially constructed and contextually relevant perspective can better frame differences observed between populations.

*Responses to cardiac rehabilitation*

Lack of engagement with cardiac rehabilitation was an important aspect of this research and this thesis showed that patient engagement with CR is complex and contingent on a variety of factors which may be implicated as barriers to engagement. Within this section both staff and participant perspectives on CR will be discussed.

The individual behavioural focus of CR is evident within the literature. However, a lack of attention to wider contextual factors (be it socio-economic, gender, age or ethnicity) as influencing factors for attendance and engagement is, by contrast, often absent in much of the cardiac rehabilitation literature. This highlights a prevailing and continued biomedical focus on the individual for success or failure in recovery after heart attack (Clark et al., 2007). Few studies showed that reasons for lack of attendance may also be related to service capacity, the conclusion being that uptake and attendance are most commonly viewed as individualised issues. This combination of factors has been often overlooked in the literature to date and this research sought to explore these gaps (Clark et al., 2007) and provided evidence outlining the importance of situating health experiences (including attendance) to and within specific places. It was also outlined in Chapter 2 that few cardiac rehabilitation studies explore lay perspectives on the reasons

for non-attendance. Most previous cardiac rehabilitation research highlighted psychological factors, quantitatively measured and analysed to provide explanations for non-attendance (Balady et al., 1994; Petrie et al., 1996; Cooper et al., 2002; 2005; 2007; Johnson & Heller, 1998). Fewer studies in addition sought to garner the views of staff regarding their perspectives on non-attendance. Predicting individual factors for attending cardiac rehabilitation without contextualising patients' experiences of their heart attack and recovery in place fails to recognise that these experiences are socially produced. This thesis has argued that for participants in this research, a number of specific barriers were identified which impacted on engagement. Institutional barriers, which included the provision of information and organisational issues, negatively impacted some participants. A number of patients who required specific interventions such as angioplasty procedures were transferred to Edinburgh, outwith Fife, and this for some impeded initial CR information provision. Service re-design for CR was occurring during the fieldwork period and a number of teething problems had resulted in information about CR being delayed or missed altogether for some participants. The information provided to participants was presented in a number of forms. Verbal information is provided by staff and a copy of the Heart Manual is provided to patients. In the main, the participants in this research appreciated the Manual. However, for some participants, due to the generic nature of the Heart Manual they felt uncertain about its usefulness for them. The lack of relevance to their circumstances contradicted, for some men in particular, their impressions of their physical capabilities post heart attack. The Manual is gendered in the way it is illustrated with diagrams and pictures of 'typical' male heart attack candidates, and the 'one size fits all' information expects individuals who have experienced a heart attack (with all its corresponding ramifications) to accurately appraise, interpret and judge their circumstances in line with the Heart Manual guidelines. For some participants in this research this proved challenging and, as a result, the Manual was often disregarded.

For participants who had received surgical interventions in the form of angioplasty procedures, being 'fixed' was presented as a mechanistic solution which provided opportunity for "doing gender" (Saltonstall, 1993) and reinforced the heart attack as an event, rather than a symptom of a chronic disease which could re-occur (Wiles &

Kinmouth, 2001). Women participants who had undergone these procedures did not articulate being 'fixed'. These surgical procedures were viewed by them more as a part of their recovery. The impact of being 'fixed' created tensions for CR staff as the effectiveness of the angioplasty procedure for recovery can impact and undermine engagement with CR as many participants (particularly men) believed themselves to be 'fixed.' The combination of being 'fixed' and not engaging with cardiac rehabilitation can also be a sign of 'doing gender', as embracing self-reliance maintains masculinity, demonstrated by believing that cardiac rehabilitation is unnecessary. There was an inherent contradiction within the medical practices and procedures used for treating heart attacks and preventing future heart attacks and a disconnect between the different elements of care occurring from the heart attack through the multiple stages of cardiac rehabilitation. Staff theorised that cardiac rehabilitation needed to be 'sold' more persuasively to encourage engagement.

Other factors for lack of engagement were identified by both patient participants and staff participants. Taking care of health is often socially constructed as 'feminine' and cardiac rehabilitation, particularly at Phase 3 encourages participants to attend classes. Some men perceived this style of 'caretaking', which is often performed in groups and encourages reflections and sharing experiences of the heart attack, as anathema to their normal social practices. Certainly it was highlighted by both patient participants and staff participants that situated lifestyles and constructions of masculinity for some men in this research, described as self-reliant, macho and stoical attitudes to their health, may have helped them cope with negative health experiences but may also have served as barriers to engagement. Staff participants argued that they were aware of differences in knowledge and understanding about cardiac rehabilitation and this was illuminated with regards to people from different social locations. Staff highlighted differences between those populations perceived to be compliant with CR (affluent) and those resistant to CR (deprived). Staff outlined that those from more 'healthy' areas were more likely to live in areas of affluence, or areas perceived to be affluent. They highlighted that they were more likely to be better educated, take more responsibility for their health and be more compliant with health messages. By contrast, perceptions of those from more deprived areas differed and staff indicated that patients from deprived areas were often more

difficult to engage with, showed less awareness of their heart health problems and seemed to take less responsibility for their health. However, staff were aware that circumstances impacted on engagement in a number of ways. There was appreciation that localised social contexts and other determinants of health, such as gender and age, combined to influence and produce differences in health and health behaviours. Differential barriers to engagement were stated. It has been argued that differences between social groups are evidenced in the ability to marshal practical and social resources needed to use services and there is often dissonance between what the health organisations' values are and the priorities of those in different circumstances (Dixon-Woods et al., 2006). Further barriers to engagement which both patient and staff participants highlighted included certain organisational and infrastructural barriers such as the overall provision and gender composition of classes in some parts of Fife, as well as the timing and location of the classes, which for some participants were inappropriate and/or hard to reach, especially for those who were of working age and/or reliant on public transport.

Attending cardiac rehabilitation had benefits and those who did attend were positive about CR and appreciative of the staff and what they had learned. Increasing engagement from those less likely to attend is a priority for cardiac rehabilitation in Fife, particularly for groups from deprived areas, elderly patients and younger, working aged patients who face different barriers for attendance. Staff believed that the NHS Fife cardiac rehabilitation service was a good service and highlighted ways engagement could be improved, which included improving communication about cardiac rehabilitation to other health workers and patients, providing accessible classes in locations which were geographically easy to access, increasing the frequency and timings of classes and providing separate classes for men and women. Cardiac rehabilitation staff recognised that the inflexibility of the current programme may impact negatively on certain populations, yet they are required to action national policies for cardiac rehabilitation. The cardiac rehabilitation programme is evidence based and approved by the National Institute for Health and Clinical Excellence (NICE) and the Scottish Intercollegiate Guideline Network (SIGN) to ensure standardised but generic, programmes. However, the programmes are often impervious to context. Staff were aware of differences in the

situated and gendered recovery experiences of heart attack patients with whom they work in Fife and tried to be flexible within the confines of the model but they had little room for manoeuvre and were unable to better contextualise services appropriately to account for these differences, often due to financial and staffing constraints. Working within national policy guidelines and providing standardised cardiac rehabilitation to some extent acted as a disconnect between localised contextual and structural factors, differentially impacting on different populations groups of which staff were aware.

Certain commonalities in heart attack experience have been outlined by men and women in this research, particularly the disruption to everyday life and the uncertainty which the heart attack raised for 'getting back to normal'. These experiences were often not fully acknowledged within cardiac rehabilitation but they are important issues for health services to understand because they are socially constructed, socially produced and socially situated in and through place. The importance of understanding the situated nature of heart attack experiences can provide a greater awareness of why people respond the way they do after their heart attack, especially in relation to cardiac rehabilitation engagement. Previous cardiac rehabilitation research often based within a bio-medical paradigm for predicting 'individual' factors explaining differences in CR engagement is arguably limited in this regard and obfuscates other influential factors which can produce differences observed within different populations.

# Conclusion

This study has a number of strengths as an original piece of work exploring men's and women's experiences of heart attack and recovery, with a distinctly NHS cardiac rehabilitation focus on recovery. The research took place in the context of post-industrial Britain and in particular within the region of Fife, located on the East coast of Scotland. It sought to move away from the focus of previous work on the 'Scottish effect' in health variations (dominated by the 'Glasgow effect', which accounts for much of Scotland's poor health statistics) by investigating the health effects of de-industrialisation in another area of Scotland. The study also contributes to research within health geography and provides evidence which is policy relevant for cardiac rehabilitation. The research adopted a nuanced approach to understanding geographies of health outcomes and the geography of experience of heart attack and recovery *in place* in Fife.

As with all research, there are also some limitations to this study. The findings are specific to the experiences of the participants from Fife collected during the fieldwork period. They are context-specific and certain aspects of the participants' experiences may not apply in the same way to those from other similar populations who have sustained a heart attack. Additionally, the methodological evolution of this project from the initial quantitative design through to the more inductive qualitative work raised a number of challenges. Combining different methods to account for and situate participants in and through place was challenging and the original quantitative design influenced many aspects of this research, including a) sampling, b) the content of the interviews and c) the interpretation of the data, as outlined below.

*Sampling*

The sampling and recruitment of participants were heavily influenced by a number of apriori categories developed from the quantitative stage of the research. In some respects the final demographic profile of the participants sampled was a limiting factor. For example, gender emerged as an important analytical category to understand men's and women's constructions of heart attack and recovery experience, but there were

fewer women sampled from across the social locations due to the original purposive sample which was based on 'area of residence' and 'attendance or non-attendance at CR.' However, during the course of the recruitment period, more men were admitted to hospital (the final sample was drawn from hospital admissions) reflecting general population trends in heart attack incidence and hospital admissions in Fife in particular. Nevertheless, a more equal sample would have been preferred and further strengthened the findings about women's heart attack and recovery experiences.

*Content of the interviews*

The main interview themes were derived from the quantitative conceptual framework and are evident in both the patient and staff interviews. In the former, the main themes in the semi-structured interviews were developed from literature and the quantitative findings about place effects on health (headings 2 and 3 in the patient interview schedule – page 290); literature about CHD health/ill health questions, including the illness perception questionnaire (heading 4 – page 291) and cardiac rehabilitation – attendance and non-attendance (heading 5 – page 292). These themes also featured in the staff interview schedule (see page 286), with the theme of cardiac rehabilitation attendance and cardiac rehabilitation non-attendance featuring prominently. In addition, emphasis was focused on practical and organisational cardiac rehabilitation issues in the staff interviews to reflect the service re-design which was occurring in NHS Fife during that time. The main themes in the interviews with patients and staff were influenced by the quantitative stage of the research but more nuanced, supplementary questions were also included, which reflected the evolving nature of the research and the move towards qualitative research.

*Interpretation of the data*

While the main content of the interviews was influenced by the original quantitative phase of the research, the analysis of the staff and patient participants' interview data, adopted a grounded theory approach. The combination of apriori themes and 'grounded' themes provided a framework for analysis and influenced the interpretation of the data. For example, the quantitative analyses of place only partly described place effects on

health, thus it was necessary to understand in greater detail the complexity of place and how place can influence health and well-being for individuals who had sustained a heart attack. By qualitatively exploring patient and staff perspectives around a number of different themes, the data gathered from both staff and patient participants provided the opportunity to explore the complex experiences and interpretations of place and health. In addition, gender, as stated previously, emerged as an important analytical category. The development of different conceptualisations of 'lifestyle' among patient and staff participants, as well as a number of interesting interpretations related to the barriers to cardiac rehabilitation engagement, emerged during the analysis.

Combining and interpreting different types of data within a single research study has its challenges, but also its advantages. The main advantage is that different research questions were developed in response to the quantitative findings which required different methods to be used in order to answer them. This provided the researcher with experience of conducting and combining different types of research within a single study. The depth and breadth of information gathered was underpinned by a robust methodological approach and the data collection and analyses, from both types of research enquiry, provided in depth understanding of the complex, but interconnected issues about place, gender and health from staff and patient participants in this research. However, the challenges of adopting this research approach meant that certain questions were not explored as fully as they could have been. For example, directly asking patients 'to which extent do you think that this area has affected your health, and in which ways' was not asked.

*Reflections*

If this research was to be repeated, more explicit questions related to individuals' health and the influences of specific places on health experiences would be included. The research focused on staff and patient participant interviews, but at only one interview time point. The aspects of place effects on health and issues related to cardiac rehabilitation could have been explored in further detail using multiple interviews, for example, and perhaps as a useful extension, longitudinally. In addition, extending this

research to include participants' biographical health histories, which can be influenced by multiple locations during their lifetime, would be an interesting inclusion. This could provide further details about the evolving influence of place effects on health and changing health experiences over time. Including family members in the research could also have provided useful and further contextualisation of place effects on health, as well as greater understanding about lifestyles, 'cause' and 'making sense' of the experience of heart attack and recovery. The original intention of pursuing this research was to undertake a study which had an applied focus. Relevant patient peer groups could have been included in the research at an earlier stage to inform and influence the research design. Additionally, if this research was to be extended, ensuring a more equal gender sample would be of prime importance.

*Implications of the research*

This research has contributed to understanding men's and women's experiences of their heart attack and recovery in four main ways. Using multi-methods for exploring heart attack and recovery required the research to evolve from understanding place as largely the geography of health variations through to understanding the geography of experience of heart attack and recovery in place. From this research, a number of suggestions and recommendations can be made to NHS Fife cardiac rehabilitation. Firstly, localised knowledge and experience is evident amongst cardiac rehabilitation staff. Their understanding of place (and people) in Fife could be utilised to develop strategies and context specific policies for population groups who are disadvantaged in engaging with cardiac rehabilitation. Gender differences were largely unarticulated with regards to further improvement of the CR service. This raises the question: Is this because the vast majority of evidence about heart attacks and cardiac rehabilitation is based on the experiences of male patients or because there is a 'gender neutral' approach to understanding heart attacks and recovery? Identifying that there were similarities and differences in heart attack experiences and responses, and the ways these can impact on heart attack experiences and recovery (including cardiac rehabilitation), is a significant contribution to encouraging greater gender sensitivity. Moreover, NHS Fife cardiac rehabilitation ought to give a greater degree of attention to gender if attendance trends

across common 'non-attender' groups (which include females) are to be addressed, both at the local level in Fife and nationally. Developing a gender sensitive and situated approach to cardiac rehabilitation is required.

Secondly, different formats and editions of the Heart Manual ought to be developed. For example, web based Manual or DVDs could potentially widen access to CR, provide more 'tailored' knowledge and make the information more appealing. Additionally, providing information to participants about heart attack experiences from people 'like them' who have experienced heart attack is advisable. This could reassure and encourage participants on their journey to recovery. The Heart Manual must also be re-produced in a gender-sensitive way. Further editions could be produced which are relevant to specific populations in a more sensitive and nuanced way. This would aid the development of the 'individualisation' of cardiac rehabilitation and would move away from generic information fit for all, but relevant for few. Perhaps those who developed the Heart Manual could include specific information for women, although this would necessitate prioritising female specific heart attack research. This researcher believes that greater gender sensitivity is overdue and given that 1 in 3 women (BHF, 2012) die from heart attack, improving understanding of women's experiences is necessary. So too is a greater understanding of different masculinities and how these influence and impact on heart attack responses and recovery (White & Johnson, 2001; Emslie et al., 2006; O'Brien et al., 2005; 2007; Robertson, 2006, Robertson et al., 2010).

Thirdly, there is a need to increase self-management cardiac rehabilitation programmes, not only for elderly populations, although this is a priority for cardiac rehabilitation in NHS Fife. The cardiac rehabilitation team were aware that the elderly population, often unable to attend classes, required further information, as did the younger working population. The assertion made here is that recovery takes place in different social locations but tailored information assessed on the basis of health beliefs and fitness levels could be developed into a home self-management programme. For example, Phase 2 which takes place in the home was highlighted by staff and participants as a crucial point of recovery. Often partners and other family members were present when the CR staff member visited and they were keen to learn more about various aspects of the condition.

Involving family support in the development of a home programme which is more specific to the participant could extend the CR toolkit. For example, the standardised cardiac rehabilitation programme is Phases 1-4. Another option could include development of better tools for assessment, including patient beliefs (such as adopting the brief IPQ), which could illuminate the extent to which participants believe their heart attack to be threatening or non-threatening. This information could allow CR staff to better identify patient needs for further support or referrals to other health care practitioners for example. Better understanding about goal setting, preferences for activities, diet plans, home exercise programmes and contact with CR staff when needed, could be developed and implemented at Phase 2. This could provide a more individualised approach to recovery within the context of participants' lived lives. The waxing and waning nature of recovery requires CR to be more flexible than the current model allows and more drop-in classes are needed. A view from participants who did attend cardiac rehabilitation was that the time between the heart attack and Phase 3 was too long. Assessments for CR Phase 3 classes should therefore occur more quickly. However, a caveat is required. This delay was experienced during this research when the service was undergoing a re-design. It is likely that the time delay has since been reduced but this is not certain.

Finally, during dissemination of the findings and feedback with cardiac rehabilitation staff at a meeting during November 2012 after the initial PhD submission, the concept of being 'fixed' after angioplasty and how this can impact on engagement with future stages of CR was highlighted. There was the suggestion by health professionals, particularly consultants, that describing patients as being 'fixed' may give patients a false sense of security and undermine the need to engage with future phases of CR. The suggestion was that staff ought to desist from using such statements and instead frame the angioplasty procedure as *part* of recovery, whilst 'prescribing' cardiac rehabilitation. Amongst those who attended that meeting, there was agreement that these surgical procedures, although highly effective, may impact on engagement with other parts of cardiac rehabilitation. Further research is needed into the language of getting 'fixed' and how this may affect engagement with future CR stages. Although there is a large body of literature about cardiac rehabilitation, the contexts where CR occurs, are often overlooked.

This thesis asserts that context matters and more attention should be paid to 'place' as a concept. This research has produced analyses and interpretations which outline the complex, co-constituted and dynamic experiences of heart attack and recovery, focusing on the interaction between places and people situated in Fife (Kearns & Moon, 2002). Further, it has contributed to understanding of heart attack experiences and responses from men and women in Fife by providing evidence for the importance of understanding a) *geographies* of health, b) how social constructions of health and ill health are produced, reproduced and relationally experienced by people in place, and c) how places may influence and shape health experiences, including lifestyles and behaviours. The thesis has highlighted that experiences of heart attack and recovery are complex and contingent on a variety of factors. By situating these experiences in and through place, the impact and consequences of heart attacks for participants' day to day lives and recovery from heart attack (including cardiac rehabilitation) are understood more holistically.

# References:


ALANDON, 2012-last update, Glenrothes: The New Town. Available: http://www.fifeserve.com/glenrothes--the--new-town.html [27.06. 2013].

ALBARRAN, J.W., CLARKE, B.A. and CRAWFORD, J., 2007. 'It was not chest pain really, I can't explain it!'An exploratory study on the nature of symptoms experienced by women during their myocardial infarction. *Journal of Clinical Nursing,* **16**(7), pp. 1292-1301.

ALKER, H.R., 1969. A typology of ecological fallacies. *Quantitative ecological analysis in the social sciences,* **3**, pp. 69–86.

ALLENDER, S., SCARBOROUGH, P., O'FLAHERTY, M. and CAPEWELL, S., 2008. Patterns of coronary heart disease mortality over the 20th century in England and Wales: possible plateaus in the rate of decline. *BMC Public Health,* **8**(1), pp. 148.

ALLISON, M. and CAMPBELL, C., 2009. "Maybe It Could Be a Heart Attack... But I'm Only 31": Young Men's Lived Experience of Myocardial Infarction—An Exploratory Study. *American Journal of Men's Health,* **3**(2), pp. 116-125.

ALONZO, A.A. and REYNOLDS, N.R., 1998. The structure of emotions during acute myocardial infarction: a model of coping. *Social science & medicine,* **46**(9), pp. 1099-1110.

ALSÉN, P., BRINK, E. and PERSSON, L., 2008. Patients' illness perception four months after a myocardial infarction. *Journal of Clinical Nursing,* **17**(5a), pp. 25-33.

ANNANDALE, E. and HUNT, K., 2000. *Gender inequalities in health.* Open University Press, Buckingham.

BACKETT, K.C. and DAVISON, C., 1995. Lifecourse and lifestyle: The social and cultural location of health behaviours* 1. *Social science & medicine,* **40**(5), pp. 629-638.

BALADY, G.J., FLETCHER, B.J., FROELICHER, E.S., HARTLEY, L.H., KRAUSS, R.M., OBERMAN, A. and TRAINING, E., 1994. Cardiac rehabilitation programs. *Circulation,* **90**, pp. 1602-1610.

BARBOUR, R.S., 1999. The case for combining qualitative and quantitative approaches in health services research. *Journal of health services research & policy,* **4**(1), pp. 39-43.

BARRETT-CONNOR, E., 2007. Hormones and heart disease in women: the timing hypothesis. *American Journal of Epidemiology,* **166**(5), pp. 506-510.

BEATTY, C. and FOTHERGILL, S., 1996. Labour market adjustment in areas of chronic industrial decline: the case of the UK coalfields. *Regional Studies,* **30**(7), pp. 627-640.

BENNETT, K., BEYNON, H. and HUDSON, R., 2000. *Coalfields regeneration: Dealing with the Consequences of Industrial Decline.* Policy Press and Josepth Rowntree Foundation.

BETHELL, H., LEWIN, R. and DALAL, H., 2009. Cardiac rehabilitation in the United Kingdom. *Heart,* **95**(4), pp. 271-275.

BETHELL, H., TURNER, S., FLINT, E. and ROSE, L., 2000. The BACR database of cardiac rehabilitation units in the UK. *Coronary Health Care,* **4**(2), pp. 92-95.

BJARNASON-WEHRENS, B., GRANDE, G., LOEWEL, H., VÖLLER, H. and MITTAG, O., 2007. Gender-specific issues in cardiac rehabilitation: do women with ischaemic heart disease need specially tailored programmes? *European Journal of Cardiovascular Prevention & Rehabilitation,* **14**(2), pp. 163-171.

BLACK, D., 1982. *Inequalities in health: the Black report.* Penguin Books.

BLAIKIE, N., 2007. *Approaches to social enquiry: Advancing knowledge.* Cambridge: Polity Press.

BLAXTER, M., 1990. *Health and lifestyles.* Psychology Press.

BLAXTER, M., 2007. How is health experienced? In: J. DOUGLAS, S. EARLE, S. HANDSLEY, L.J. JONES, C.E. LLOYD and S. SPURR, eds, *A reader in promoting public health: Challenge and controversy.* London: Sage, pp. 26-32.

BLAXTER, M., 2004. *Health and lifestyles.* Routledge.

BLAXTER, M., 1997. Whose fault is it? People's own conceptions of the reasons for health inequalities. *Social science & medicine,* **44**(6), pp. 747-756.

BOURDIEU, P., 1990. *The logic of practice.* Stanford University Press.

BOURDIEU, P., 1984. *Distinction: A social critique of the judgement of taste.* Harvard University Press.

BOYLE, P., EXETER, D. and FLOWERDEW, R., 2004. The role of population change in widening the mortality gap in Scotland. *Area,* **36**(2), pp. 164-173.

BOYLE, P., CURTIS, S., GRAHAM, E. and MOORE, E., 2004. *The geography of health inequalities in the developed world: views from Britain and North America.* Ashgate Publishing Ltd.

BRINDLE, P., MCCONNACHIE, A., UPTON, M., HART, C., DAVEY SMITH, G. and WATT, G., 2005. The accuracy of the Framingham risk-score in different socioeconomic groups: a prospective study. *British Journal of General Practice,* **55**(520), pp. 838-845.

BRINK, E., KARLSON, B.W. and HALLBERG, L.R., 2002. To be stricken with acute myocardial infarction: A grounded theory study of symptom perception and care-seeking behaviour. *Journal of health psychology,* **7**(5), pp. 533-543.

BRITISH ASSOCIATION FOR CARDIAC REHABILITATION, 2007. *Standards and Core Components for Cardiac Rehabilitation.* BACR.

BRITISH ASSOCIATION FOR CARDIOVASCULAR PREVENTION AND REHABILITATION, 2008-last update, Principles of Exercise for Cardiac Patients [Homepage of BACPR], [Online]. Available: http://www.bacrphaseiv.co.uk/ [04.08. 2008].

BRITISH HEART FOUNDATION, 2012-last update, Women and heart [Online]. Available: http://www.bhf.org.uk/heart-health/conditions/women-and-heart-disease.aspx [20.05. 2012].

BRITISH HEART FOUNDATION, 2009-last update, Two-thirds of heart attack survivors miss out on life-saving service, [Online]. Available: http://www.bhf.org.uk/default.aspx?page=10359 [04.11. 2013].

BRITISH HEART FOUNDATION, 2008. *The National Audit of Cardiac Rehabilitation Annual Statistical Report 2008.* British Heart Foundation.

BROADBENT, E., PETRIE, K.J., MAIN, J. and WEINMAN, J., 2006. The brief illness perception questionnaire. *Journal of psychosomatic research,* **60**(6), pp. 631-637.

BRYMAN, A., 2007. Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research,* **1**(1), pp. 8-22.

BRYMAN, A., 2012. *Social research methods.* Oxford university press.

BRYMAN, A., 2006. Integrating quantitative and qualitative research: how is it done? *Qualitative research,* **6**(1), pp. 97-113.

BRYMAN, A., 2003. *Quantity and quality in social research.* Routledge.

BUNTON, R., BURROWS, R. and NETTLETON, S., 2003. *The sociology of health promotion: critical analyses of consumption, lifestyle and risk.* Routledge.

BURR, G., 1996. Unfinished business: Interviewing family members of critically ill patients. *Nursing inquiry,* **3**(3), pp. 172-177.

BURY, M., 1982. Chronic illness as biographical disruption. *Sociology of health & illness,* **4**(2), pp. 167-182.

CALNAN, M., 1987. *Health and illness: The lay perspective.* Tavistock.

CANNON, K.W., 1989. *A comparison of guilt disposition in sexually abused and non-abused college females.* Abilene Christian University.

CANNON, S., 1992. Reflections on fieldwork in stressful situations. *Studies in qualitative methodology,* **3**, pp. 147-182.

CAPEWELL, S., MURPHY, N., MACINTYRE, K., FRAME, S., STEWART, S., CHALMERS, J., BOYD, J., FINLAYSON, A., REDPATH, A. and MCMURRAY, J., 2006. Short-term and long-term outcomes in 133,429 emergency patients admitted with angina or myocardial infarction in Scotland, 1990–2000: population-based cohort study. *Heart,* **92**(11), pp. 1563-1570.

CARSTAIRS, V. and MORRIS, R., 1989. Deprivation: explaining differences in mortality between Scotland and England and Wales. *British medical journal,* **299**(6704), pp. 886-889.

CATTELL, V., DINES, N., GESLER, W. and CURTIS, S., 2008. Mingling, observing, and lingering: everyday public spaces and their implications for well-being and social relations. *Health & Place,* **14**(3), pp. 544-561.

CHARMAZ, K., 2006. *Constructing grounded theory: A practical guide through qualitative analysis.* Sage.

CHARMAZ, K., 1995. Grounded theory: Rethinking methods in psychology. Sage.

CHARMAZ, K., 2006. *Constructing grounded theory: A practical guide through qualitative analysis.* Pine Forge Press.

CHARMAZ, K., 2003. Grounded theory. *Strategies of qualitative inquiry,* **2**, pp. 249.

CHARMAZ, K., 1995. The body, identity, and self. *The Sociological Quarterly,* **36**(4), pp. 657-680.

CHARMAZ, K., 1991. *Good days, bad days: The self and chronic illness in time.* Rutgers University Press.

CLARK, A.J., 2003. *Wish you were here? Experiences of moving through stigmatised neighbourhoods in urban Scotland.* PhD edn. University of St Andrews.

CLARK, A.M., BARBOUR, R.S. and MCINTYRE, P.D., 2002. Preparing for change in the secondary prevention of coronary heart disease: a qualitative evaluation of cardiac rehabilitation within a region of Scotland. *Journal of advanced nursing,* **39**(6), pp. 589-598.

CLARK, A.M., BARBOUR, R.S., WHITE, M. and MACINTYRE, P.D., 2004. Promoting participation in cardiac rehabilitation: patient choices and experiences. *Journal of advanced nursing,* **47**(1), pp. 5-14.

CLARK, A.M., WHELAN, H.K., BARBOUR, R. and MACINTYRE, P.D., 2005. A realist study of the mechanisms of cardiac rehabilitation. *Journal of advanced nursing,* **52**(4), pp. 362-371.

CLARK, A.M., 2003. 'It's like an explosion in your life': lay perspectives on stress and myocardial infarction. *Journal of Clinical Nursing,* **12**(4), pp. 544 – 543.

CLARK, A.M., MACINTYRE, P.D. and CRUICKSHANK, J., 2007. A critical realist approach to understanding and evaluating heart health programmes. *Health,* **11**(4), pp. 513 – 539.

CLARKE, J. and VAN AMEROM, G., 2008. Mass print media depictions of cancer and heart disease: community versus individualistic perspectives? *Health & Social Care in the Community,* **16**(1), pp. 96-103.

CLYDE WATERFRONT, 2012-last update, 'Carrier block starts journey' [Homepage of Clyde Waterfront], [Online]. Available: http://www.clydewaterfront.com/news/latest-news/2011/moving-the-aircraft-carrier [06/13, 2013].

COALFIELDS COMMUNITY CAMPAIGN, 2007. *Deprivation in Scottish Coalfield Communities.* Coalfields Community Campaign, Scotland.

COCKERHAM, W.C., 2005. Health lifestyle theory and the convergence of agency and structure. *Journal of health and social behavior,* pp. 51-67.

CONNELL R.W., 1987. *Gender and Power: Society, the Person and Sexual Politics.* Cambridge: Polity Press.

CONNELL, R.W., 2005. *Masculinities.* University of California Press.

CONNELL, R.W., 1996. New directions in gender theory, masculinity research, and gender politics. *Ethnos,* **61**(3-4), pp. 157-176.

CONNELL, R.W., 1995. Masculinities: knowledge, power and social change. University of California Press.

CONNELL, R. and MESSERSCHMIDT, J.W., 2005. Hegemonic Masculinity. *Gender & Society,* **19**(6), pp. 829-859.

CONRAD, P. and BARKER, K.K., 2010. The Social Construction of Illness. *Journal of health and social behavior,* **51**(1 suppl), pp. 67-79.

COOPER, A., JACKSON, G., WEINMAN, J. and HORNE, R., 2005. A qualitative study investigating patients' beliefs about cardiac rehabilitation. *Clinical rehabilitation,* **19**(1), pp. 87-96.

COOPER, A., JACKSON, G., WEINMAN, J. and HORNE, R., 2002. Factors associated with cardiac rehabilitation attendance: a systematic review of the literature. *Clinical rehabilitation,* **16**(5), pp. 541-552.

COOPER, A., WEINMAN, J., HANKINS, M., JACKSON, G. and HORNE, R., 2007. Assessing patients' beliefs about cardiac rehabilitation as a basis for predicting attendance after acute myocardial infarction. *British medical journal,* **93**(1), pp. 53-58.

CORBIN, J.M. and STRAUSS, A., 1990. Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology,* **13**(1), pp. 3-21.

COURTENAY, W., 2009. Theorising masculinity and men's health. *Men's health: Body, identity and social context, Wiley-Blackwell,* pp. 9-32.

COURTENAY, W.H., 2000. Constructions of masculinity and their influence on men's well-being: a theory of gender and health. *Social science & medicine,* **50**(10), pp. 1385-1401.

CRESWELL, J.W., 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* 2nd ed. Sage.

CRESWELL, J.W., 1998. *Qualitative inquiry and research design: Choosing among five traditions.* Sage.

CROMBY, J., 2005. Theorizing embodied subjectivity. *International Journal of Critical Psychology,* **15**, pp. 133-150.

CROSSLEY, M.L., 2003. 'Would you consider yourself a healthy person?': Using focus groups to explore health as a moral phenomenon. *Journal of health psychology,* **8**(5), pp. 501-514.

CUMMINS, S., CURTIS, S., DIEZ-ROUX, A.V. and MACINTYRE, S., 2007. Understanding and representing 'place' in health research: a relational approach. *Social science & medicine,* **65**(9), pp. 1825-1838.

CURRY, P. and O'BRIEN, M., 2006. The male heart and the female mind: a study in the gendering of antidepressants and cardiovascular drugs in advertisements in Irish medical publication. *Social science & medicine,* **62**(8), pp. 1970-1977.

CURTIS, S. and REES JONES, I., 1998. Is there a place for geography in the analysis of health inequality? *Sociology of health & illness,* **20**(5), pp. 645-672.

DAVISON C, FRANKEL S AND DAVEY-SMITH, G., 1989. Inheriting heart trouble: the relevance of common-sense ideas to preventive measures. *Health Education Research - Theory and Practice,* **4**(3), pp. 329.

DAVISON, C., FRANKEL, S. and SMITH, G.D., 1992. The limits of lifestyle: Re-assessing fatalism in the popular culture of illness prevention. *Social science & medicine,* **34**(6), pp. 675-685.

DAVISON, C., SMITH, G.D. and FRANKEL, S., 1991. Lay epidemiology and the prevention paradox: the implications of coronary candidacy for health education. *Sociology of health & illness,* **13**(1), pp. 1-19.

DENTON, M. and WALTERS, V., 1999. Gender differences in structural and behavioral determinants of health: an analysis of the social production of health. *Social science & medicine,* **48**(9), pp. 1221-1235.

DENZIN, N.K., 1970. *The research act.* Aldine.

DEPARTMENT OF HEALTH, 2000. *National Service Framework for Coronary Heart Disease.* Department of Health, London.

DICKSON-SWIFT, V., JAMES, E.L., KIPPEN, S. and LIAMPUTTONG, P., 2008. Risk to researchers in qualitative research on sensitive topics: Issues and strategies. *Qualitative health research,* **18**(1), pp. 133-144.

DIEZ ROUX, A.V. and MAIR, C., 2010. Neighborhoods and health. *Annals of the New York Academy of Sciences,* **1186**(1), pp. 125-145.

DIEZ ROUX, A., 2007. Neighborhoods and health: where are we and where do we go from here? *Revue d'épidémiologie et de santé publique,* **55**(1), pp. 13-21.

DIXON, T., LIM, L.L., POWELL, H. and FISHER, J.D., 2000. Psychosocial experiences of cardiac patients in early recovery: a community‐based study. *Journal of advanced nursing,* **31**(6), pp. 1368-1375.

DIXON-WOODS, M., CAVERS, D., AGARWAL, S., ANNANDALE, E., ARTHUR, A., HARVEY, J., HSU, R., KATBAMNA, S., OLSEN, R. and SMITH, L., 2006. *Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups.* http://www.biomedcentral.com/1471-2288/6/35 edn. BioMed Central Ltd.

DORLING, D., SMITH, G., NOBLE, M., WRIGHT, G., BURROWS, R., BRADSHAW, J., JOSHI, H., PATTIE, C., MITCHELL, R. and GREEN, A.E., 2001. How much does place matter? *Environment and Planning A,* **33**(1), pp. 335-369.

DOUGLAS, J., EARLE, S., HANDSLEY, S., JONES, L.J., LLOYD, C.E. and SPURR, S., 2009. *A Reader in Promoting Public Health.* Sage.

DOUGLAS, M. and WILDAVSKY, A., 1982. How Can We Know the Risks We Face? Why Risk Selection Is a Social Process. *Risk Analysis,* **2**(2), pp. 49-58.

EARLE, S., LLOYD, C., SIDELL, M. and SPURR, S., 2007. Theory and Research in Promoting Public Health. Sage.

EAST, L., BROWN, K. and TWELLS, C., 2004. 'Knocking at St Peter's door'. A qualitative study of recovery after a heart attack and the experience of cardiac rehabilitation. *Primary health care research and development,* **5**(03), pp. 202-210.

ECOB, R. and MACINTYRE, S., 2000. Small area variations in health related behaviours; do these depend on the behaviour itself, its measurement, or on personal characteristics? *Health and Place,* **6**(4), pp. 261-274.

EFRE, A.J., 2004. Gender bias in acute myocardial infarction. *The Nurse practitioner,* **29**(11), pp. 42-55.

EISENBERG, L., 1977. Disease and illness Distinctions between professional and popular ideas of sickness. *Culture, medicine and psychiatry,* **1**(1), pp. 9-23.

ELLAWAY, A., MACINTYRE, S. and KEARNS, A., 2001. Perceptions of place and health in socially contrasting neighbourhoods. *Urban Studies,* **38**(12), pp. 2299-2316.

EMSLIE, C., 2005. Women, men and coronary heart disease: a review of the qualitative literature. *Journal of advanced nursing,* **51**(4), pp. 382-395.

EMSLIE, C. and HUNT, K., 2009. Men, masculinities and heart disease. *Current Sociology,* **57**(2), pp. 155.

EMSLIE, C., HUNT, K. and WATT, G., 2001. Invisible women? The importance of gender in lay beliefs about heart problems. *Sociology of health & illness,* **23**(2), pp. 203-233.

EMSLIE, C., RIDGE, D., ZIEBLAND, S. and HUNT, K., 2006. Men's accounts of depression: Reconstructing or resisting hegemonic masculinity? *Social science & medicine,* **62**(9), pp. 2246-2257.

EVANS, J., FRANK, B., OLIFFE, J.L. and GREGORY, D., 2011. Health, Illness, Men and Masculinities (HIMM): a theoretical framework for understanding men and their health. *Journal of Men's Health,* **8**(1), pp. 7-15.

EXECUTIVE, S., 2003. Improving Health in Scotland: the challenge. Edinburgh: Scottish Executive.

EXECUTIVE, S., 1999. Towards a healthier Scotland. Edinburgh: Scottish Executive.

FIFE COUNCIL, 2010-last update, History articles: Glenrothes [Homepage of Fife Council], [Online]. Available: http://www.fifedirect.org.uk/yourtown/index.cfm [15.9. 2011].

FINLAY, L., 2002. "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative health research,* **12**(4), pp. 531-545.

FLOWERDEW, R., MANLEY, D.J. and SABEL, C.E., 2008. Neighbourhood effects on health: Does it matter where you draw the boundaries? *Social science & medicine*, ***66***(6), 1241-1255.

FODOR, J.G. and TZEROVSKA, R., 2004. Coronary heart disease: is gender important? *The journal of men's health & gender,* **1**(1), pp. 32-37.

FOROUHI, N.G. and SATTAR, N., 2006. CVD risk factors and ethnicity—A homogeneous relationship? *Atherosclerosis Supplements,* **7**(1), pp. 11-19.

FOSTER, S. and MALLIK, M., 1998. A comparative study of differences in the referral behaviour patterns of men and women who have experienced cardiac-related chest pain. *Intensive and Critical Care Nursing,* **14**(4), pp. 192-202.

FOUCAULT, M., 1977. *Discipline and Punish.* Vintage.

FOUCAULT, M., 1975. *The birth of the clinic.* Vintage.

FOX, N.J., 2011. The ill-health assemblage: Beyond the body-with-organs. *Health Sociology Review,* **20**(4), pp. 359-371.

FRANKEL, S., DAVISON, C. and SMITH, G.D., 1991. Lay epidemiology and the rationality of responses to health education. *The British Journal of General Practice,* **41**(351), pp. 428.

FRENCH, D., MAISSI, E. and MARTEAU, T., 2005. The purpose of attributing cause: beliefs about the causes of myocardial infarction. *Social science & medicine,* **60**(7), pp. 1411-1421.

FROHLICH, K.L., CORIN, E. and POTVIN, L., 2001. A theoretical proposal for the relationship between context and disease. *Sociology of health & illness,* **23**(6), pp. 776-797.

GADAMER, H., GAIGER, J. and WALKER, N., 1996. *The enigma of health: The art of healing in a scientific age.* Polity Press.

GALDAS, P., CHEATER, F. and MARSHALL, P., 2007. What is the role of masculinity in white and South Asian men's decisions to seek medical help for cardiac chest pain? *Journal of health services research & policy,* **12**(4), pp. 223-229.

GALDAS, P.M., JOHNSON, J.L., PERCY, M.E. and RATNER, P.A., 2010. Help seeking for cardiac symptoms: Beyond the masculine-feminine binary. *Social science & medicine,* **71**(1), pp. 18-24.

GALDAS, P., KANG, H. and BINDY, K., 2010. Punjabi Sikh patients' cardiac rehabilitation experiences following myocardial infarction: a qualitative analysis. *Journal of Clinical Nursing,* **19**(21‐22), pp. 3134-3142.

GALSTER, G.C., 2012. The mechanism (s) of neighbourhood effects: Theory, evidence, and policy implications. *Neighbourhood effects research: New perspectives.* Springer, pp. 23-56.

GALVIN, R., 2002. Disturbing notions of chronic illness and individual responsibility: Towards a genealogy of morals. *Health:* **6**(2), pp. 107-137.

GARRETT, E., REID, A., SCHÜRER, K. and SZRETER, S., 2006. *Changing family size in England and Wales: Place, class and demography, 1891-1911.* Cambridge University Press.

GATRELL, A.C., 2002. *Geographies of health: an introduction.* Blackwell.

GATRELL, A.C. and ELLIOTT, S.J., eds, 2009. *Geographies of Health. An Introduction.* 2nd ed. Wiley Blackwell.

GATRELL, A.C., POPAY, J. and THOMAS, C., 2004. Mapping the determinants of health inequalities in social space: can Bourdieu help us? *Health and Place,* **10**(3), pp. 245-257.

GESLER, W.M., 1998. Bath's reputation as a healing place. In: R.A. KEARNS and W.M. GESLER, eds, *Putting health into place: Landscape, identity, and well-being*: Syracuse University Press, pp. 17-35.

GLASER, B.G., 1978. *Theoretical sensitivity: Advances in the methodology of grounded theory.* Sociology Press.

GLASER, B.G. and STRAUSS, A.L., 1967. *The discovery of grounded theory: Strategies for qualitative research.* Aldine.

GLENROTHES, 2012-last update, Glenrothes Fife : images and stuff out and about in Glenrothes Fife. Available: http://glenrothes-fife.co.uk/history/ [13.06. 2013].

GOFFMAN, E. and FLACKS, R., 1973. The mortification of self. *Conformity, resistance and self-determination: The individual and authority,* pp. 178.

GORDON, D., 1999. *Inequalities in health: the evidence; the evidence presented to the Independent Inquiry into Inequalities in Health, chaired by Sir Donald Acheson.* The Policy Press.

GOUGH, B., 2006. Try to be healthy, but don't forgo your masculinity: Deconstructing men's health discourse in the media. *Social science & medicine,* **63**(9), pp. 2476-2488.

GRACE, S.L., ABBEY, S.E., BISAILLON, S., SHNEK, Z.M., IRVINE, J. and STEWART, D.E., 2003. Presentation, delay, and contraindication to thrombolytic treatment in females and males with myocardial infarction. *Women's Health Issues,* **13**(6), pp. 214-221.

GRAHAM, H., 2001. *Understanding health inequalities.* Open University Press.

GRAHAM, P., WALSH, D. and MCCARTNEY, G., 2012. Shipyards and sectarianism: How do mortality and deprivation compare in Glasgow and Belfast? *Public health,* **126**(5), pp. 378-385.

GRAHAM, E., 1999. Breaking Out: The Opportunities and Challenges of Multi-Method Research in Population Geography. *The Professional Geographer,* **51**(1), pp. 76-89.

GREENBERG, M.R. and SCHNEIDER, D., 1996. *Environmentally devastated neighborhoods: Perceptions, policies, and realities.* Rutgers University Press.

GREGORY, S., BOSTOCK, Y. and BACKETT-MILBURN, K., 2006. Recovering from a heart attack: a qualitative study into lay experiences and the struggle to make lifestyle changes. *Family practice,* **23**(2), pp. 220-225.

GUBA, E.G. and LINCOLN, Y.S., 1994. Competing paradigms in qualitative research. *Handbook of qualitative research,* **2**, pp. 163-194.

HAGSTRÖM, B., MATTSSON, B. and SKOTT, A., 2005. My sickness and me: Men with cardiovascular disease and their perceptions of their illness and medication. *The journal of men's health & gender,* **2**(4), pp. 429-435.

HAMMERSLEY, M., 2008. Troubles with triangulation. *Advances in mixed methods research,* pp. 22-36.

HAMMERSLEY, M., 1996. The relationship between qualitative and quantitative research: paradigm loyalty versus methodological eclecticism. *Handbook of qualitative research methods for psychology and the social sciences,* pp. 159-174.

HANSEN, E., 2003. Doctors as lay epidemiologists: areas of commonality between medical and lay accounts of lifestyle, *Paper in Conference Proceedings of the Australian Sociological Association Conference, University of New England,* 2003.

HANSEN, E. and EASTHOPE, G., 2007. *Lifestyle in medicine.* Wiley Online Library.

HART, P.L., 2005. Women's perceptions of coronary heart disease: an integrative review. *Journal of Cardiovascular Nursing,* **20**(3), pp. 170-176.

HART, C., ECOB, R. and SMITH, G.D., 1997. People, places and coronary heart disease risk factors: a multilevel analysis of the Scottish Heart Health Study archive. *Social science & medicine,* **45**(6), pp. 893-902.

HEART UK, 2011-last update, Risk Factors for CHD [Homepage of heartuk.org], [Online]. Available: https://docs.google.com/viewer?a=v&q=cache:-lvDhmMlUdQJ:heartuk.org.uk/images/ [19.07. 2012].

HERZLICH, C. and PIERRET, J., 1987. *Illness and self in society.* Johns Hopkins University Press.

HOLDCROFT, A., 2007. Gender bias in research: how does it affect evidence based medicine? *Journal of the Royal Society of Medicine,* **100**(1), pp. 2-3.

HOUSE OF COMMONS HEALTH COMMITTEE, 2009. *Health inequalities.* The Stationery Office.

HUNT, K., DAVISON, C., EMSLIE, C. and FORD, G., 2000. Are perceptions of a family history of heart disease related to health-related attitudes and behaviour? *Health education research,* **15**(2), pp. 131-141.

HUNT, K., LEWARS, H., EMSLIE, C. and BATTY, G.D., 2007. Decreased risk of death from coronary heart disease amongst men with higher 'femininity'scores: a general population cohort study. *International journal of epidemiology,* **36**(3), pp. 612-620.

HUTTON, J.M. and PERKINS, S.J., 2008. A qualitative study of men's experience of myocardial infarction. *Psychology, Health and Medicine,* **13**(1), pp. 87-97.

HUTTON, G., 1999. *Fife: The Mining Kingdom.* Stenlake Publishing.

IDEA - IMPROVEMENT AND DEVELOPMENT AGENCY, 2010. *Health inequalities in ex-coalfield/industrial communities.* London: IDeA.

JACKSON, A.M., 2009. *Rehabilitation after myocardial infarction: experiences and perspectives of people who do not use cardiac rehabilitation and/or CHD 'self-help 'groups and their 'significant others'*, PhD edn. The University of Edinburgh.

JACKSON, B., DIMMOCK, J., TAYLOR, I. and HAGGER, M., 2012. The tripartite efficacy framework in client–therapist rehabilitation interactions: Implications for relationship quality and client engagement. *Rehabilitation psychology,* **57**(4), pp. 308.

JACKSON, J.L. and EMERY, C.F., 2013. Emotional Distress, Alexithymia, and Coping as Predictors of Cardiac Rehabilitation Outcomes and Attendance. *Journal of cardiopulmonary rehabilitation and prevention,* **33**(1), pp. 26-32.

JACKSON, D., DALY, J., DAVIDSON, P., ELLIOTT, D., CAMERON-TRAUB, E., WADE, V., CHIN, C. and SALAMONSON, Y., 2000. Women recovering from first-time myocardial infarction (MI): a feminist qualitative study. *Journal of advanced nursing,* **32**(6), pp. 1403-1411.

JACKSON, L., LECLERC, J., ERSKINE, Y. and LINDEN, W., 2005. Getting the most out of cardiac rehabilitation: a review of referral and adherence predictors. *British medical journal,* **91**(1), pp. 10-14.

JENNINGS, D., 1986. The confusion between disease and illness in clinical medicine. *CMAJ: Canadian Medical Association Journal,* **135**(8), pp. 865-870.

JENSEN, B.O. and PETERSSON, K., 2003. The illness experiences of patients after a first time myocardial infarction. *Patient education and counseling,* **51**(2), pp. 123-131.

JOHANSSON, A., DAHLBERG, K. and EKEBERGH, M., 2003. Living with experiences following a myocardial infarction. *European journal of cardiovascular nursing,* **2**(3), pp. 229-236.

JOHNSON, J. and MORSE, J., 1990. Regaining control: the process of adjustment after myocardial infarction. *Heart & Lung: The Journal of Acute and Critical Care,* **19**(2), pp. 126-137.

JOHNSON, N. and HELLER, R., 1998. Prediction of patient nonadherence with home-based exercise for cardiac rehabilitation: the role of perceived barriers and perceived benefits. *Preventive medicine,* **27**(1), pp. 56-64.

JOHNSON, R.B. and ONWUEGBUZIE, A.J., 2004. Mixed methods research: A research paradigm whose time has come. *Educational researcher,* **33**(7), pp. 14-26.

JOHNSON, R.B., ONWUEGBUZIE, A.J. and TURNER, L.A., 2007. Toward a definition of mixed methods research. *Journal of mixed methods research,* **1**(2), pp. 112-133.

JOHNSTON, R.J., GREGORY, D., PRATT, G. and WATTS, M., 2000. *The dictionary of human geography.* Blackwell.

JONES, K. and MOON, G., 1993. Medical geography: taking space seriously. *Progress in Human Geography,* **17**(4), pp. 515-524.

JONES, M.I., GREENFIELD, S. and JOLLY, K., 2009. Patients'experience of home and hospital based cardiac rehabilitation: A focus group study. *European Journal of Cardiovascular Nursing,* **8**(1), pp. 9-17.

KAWACHI, I. and SUBRAMANIAN, S., 2007. Neighbourhood influences on health. *Journal of epidemiology and community health,* **61**(1), pp. 3-4.

KAWACHI, I. and BERKMAN, L.F., 2003. *Neighborhoods and health.* Oxford University Press.

KEARNS, R. and MOON, G., 2002. From medical to health geography: novelty, place and theory after a decade of change. *Progress in Human Geography,* **26**(5), pp. 605.

KEARNS, R.A., 1993. Place and Health: Towards a Reformed Medical Geography. *The Professional Geographer,* **45**(2), pp. 139-147.

KEATON, K. and PIERCE, L., 2000. Cardiac Therapy for Men with Coronary Artery Disease The Lived Experience. *Journal of holistic nursing,* **18**(1), pp. 63-85.

KELLY, M. and GAMBLE, C., 2005. Exploring the concept of recovery in schizophrenia. *Journal of psychiatric and mental health nursing,* **12**(2), pp. 245-251.

KING, L., 2001. *Sair, Sair, Wark: Women and Mining in Scotland.* Kirkcaldy: Windfall Books.

KIRKCALDY DISTRICT MUSEUM, 1994. *Fishing : The Maritime History of Kirkcaldy District.* Kirkcaldy: Kirkcaldy District Council.

KLEINMAN, A., 1988. *The illness narratives: Suffering, healing and the human condition.* Basic Books.

KOTSEVA, K., WOOD, D., DE BACKER, G., DE BACQUER, D., PYÖRÄLÄ, K. and KEIL, U., 2009. EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *European Journal of Cardiovascular Prevention & Rehabilitation,* **16**(2), pp. 121-137.

KRISTOFFERZON, M.L., LÖFMARK, R. and CARLSSON, M., 2007. Striving for balance in daily life: experiences of Swedish women and men shortly after a myocardial infarction. *Journal of Clinical Nursing,* **16**(2), pp. 391-401.

KURIAN, A.K. and CARDARELLI, K.M., 2007. Racial and ethnic differences in cardiovascular disease risk factors: a systematic review. *Ethnicity and Disease,* **17**(1), pp. 143.

KUZEL, A.J., 1992. Sampling in qualitative inquiry. *Research methods for primary care,* ***3*****,** pp. 31-44.

LAWLER, S., 2004. Rules of engagement: Habitus, power and resistance. *Feminism after Bourdieu,* pp. 110-128.

LEE, R.E. and CUBBIN, C., 2002. Neighborhood context and youth cardiovascular health behaviors. *American Journal of Public Health,* **92**(3), pp. 428-436.

LEE, R.M. and RENZETTI, C.M. 1993. "The problems of researching sensitive topics." *SAGE FOCUS EDITIONS* **152**, 3-3.

LEON, D.A., MORTON, S., CANNEGIETER, S. and MCKEE, M., 2002. *Understand the health of Scotland's population in an international context:* Edinburgh: Public Health Institute of Scotland.

LEVENTHAL, H., LEVENTHAL, E.A. and BRELAND, J.Y., 2011. Cognitive science speaks to the "common-sense" of chronic illness management. *Annals of Behavioral Medicine,* **41**(2), pp. 152-163.

LEVENTHAL, H., WEINMAN, J., LEVENTHAL, E.A. and PHILLIPS, L.A., 2008. Health psychology: the search for pathways between behavior and health. *Annu.Rev.Psychol.,* **59**, pp. 477-505.

LEWIN, B., 1994. *The Heart Manual.* Edinburgh: Edinburgh Health Care NHS Trust.

LLOYD-JONES, D., ADAMS, R.J., BROWN, T.M., CARNETHON, M., DAI, S., DE SIMONE, G., FERGUSON, T.B., FORD, E., FURIE, K. and GILLESPIE, C., 2010. Heart disease and stroke statistics—2010 update. *Circulation,* **121**(7), pp. e46-e215.

LOCKYER, L. and BURY, M., 2002. The construction of a modern epidemic: the implications for women of the gendering of coronary heart disease. *Journal of advanced nursing,* **39**(5), pp. 432-440.

LUPTON, D., 2003. *Medicine as culture: Illness, disease and the body in western societies.* Sage.

LUPTON, D., 1997. Foucault and the medicalisation critique. *Foucault, health and medicine,* pp. 94-110.

LYNCH, J., HARPER, S. and SMITH, G.D., 2003. Commentary: Plugging leaks and repelling boarders—where to next for the SS Income Inequality? *International journal of epidemiology,* **32**(6), pp. 1029-1036.

LYNCH, J.W., SMITH, G.D., KAPLAN, G.A. and HOUSE, J.S., 2000. Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions. *British medical journal,* **320**(7243), pp. 1200-1204.

MACINTYRE, S., 2007. *Inequalities in health in Scotland: what are they and what can we do about them?* 17. Glasgow: Medical Research Council Social and Public Health Sciences Unit.

MACINTYRE, S., HUNT, K. and SWEETING, H., 1996. Gender differences in health: are things really as simple as they seem? *Social science & medicine,* **42**(4), pp. 617-624.

MACINTYRE, S., MACIVER, S. and SOOMAN, A., 1993. Area, class and health: should we be focusing on places or people? *Journal of social policy,* **22**(02), pp. 213-234.

MACINTYRE, S., 1994. Understanding the social patterning of health: the role of the social sciences. *Journal of Public Health,* **16**(1), pp. 53-59.

MACINTYRE, S., ELLAWAY, A. and CUMMINS, S., 2002. Place effects on health: how can we conceptualise, operationalise and measure them? *Social science & medicine,* **55**(1), pp. 125-139.

MARKS S, IN MASSEY, D (1984), 1980. 'South monopolises microchips: decision to build at Bristol is bad news for depressed regions', *New Statesman*.

MARMOT, M.G., 2003. Understanding social inequalities in health. *Perspectives in biology and medicine,* **46**(3 Suppl), pp. S9.

MARMOT, M.G., SMITH, G.D., STANSFELF, S., PATEL, C., NORTH, F., HEAD, J., WHITE, I., BRUNNER, E. and FEENEY, A., 1991. Health Inequalities among British Civil Servants: The Whitehall ii Study. *Lancet,* **337**(8754), pp. 1387-1393.

MARMOT, M.G. and WILKINSON, R.G., 2006. *Social Determinants of Health.* 2nd ed. Oxford University Press.

MARMOT, M. and WILKINSON, R.G., 2001. Psychosocial and material pathways in the relation between income and health: a response to Lynch et al. *British medical journal,* **322**(7296), pp. 1233-1236.

MASON, J., 2002. *Qualitative researching.* Sage.

MASSEY, D., 1983. Industrial restructuring as class restructuring: production decentralization and local uniqueness. *Regional Studies,* **17**(2), pp. 73-89.

MASSEY, D.B., 1994. *Space, place, and gender.* University of Minnesota Press.

MASSEY, D.B., ALLEN, J. and SARRE, P., 1999. *Human geography today.* Polity Press.

MAYS, N. and POPE, C., 2000. Assessing quality in qualitative research. *Brish medical journal,* **320**(7226), pp. 50-52.

MAYS, N. and POPE, C., 1995. Qualitative research: rigour and qualitative research. *British medical journal,* **311**(6997), pp. 109-112.

MCCARTNEY, G., COLLINS, C., WALSH, D. and BATTY, D., 2011. Accounting for Scotland's excess mortality: towards a synthesis. *Glasgow Centre for Population Health,* pp. 1-87.

MCDOWELL, L. and SHARP, J.P., 1997. *Space, Gender, Knowledge.* Arnold.

MCDOWELL, L. and SHARPE, J., 1999. *A feminist glossary of human geography.* Arnold.

MCGEE, H.M. and HORGAN, J.H., 1992. Cardiac rehabilitation programmes: are women less likely to attend? *British Medical Journal,* **305**(6848), pp. 283.

MCSWEENEY, J.C., CODY, M., O'SULLIVAN, P., ELBERSON, K., MOSER, D.K. and GARVIN, B.J., 2003. Women's early warning symptoms of acute myocardial infarction. *Circulation,* **108**(21), pp. 2619-2623.

MEDVED, M.I. and BROCKMEIER, J., 2011. Heart Stories Men and Women after a Cardiac Incident. *Journal of health psychology,* **16**(2), pp. 322-331.

MEISCHKE, H., EISENBERG, M.S. and LARSEN, M.P., 1993. Prehospital delay interval for patients who use emergency medical services: the effect of heart-related medical conditions and demographic variables. *Annals of Emergency Medicine,* **22**(10), pp. 1597-1601.

MEISCHKE, H., LARSEN, M.P. and EISENBERG, M.S., 1998. Gender differences in reported symptoms for acute myocardial infarction: impact on prehospital delay time interval. *The American Journal of Emergency Medicine,* **16**(4), pp. 363-366.

MELVILLE, M., PACKHAM, C., BROWN, N., WESTON, C. and GRAY, D., 1999. Cardiac rehabilitation: socially deprived patients are less likely to attend but patients ineligible for thrombolysis are less likely to be invited. *British medical journal,* **82**(3), pp. 373-377.

MERLEAU-PONTY, M., 1996. *Phenomenology of perception.* Motilal Banarsidass Publishing.

MILLER, C.L., 2002. A review of symptoms of coronary artery disease in women. *Journal of advanced nursing,* **39**(1), pp. 17-23.

MINICHIELLO, V., ARONI, R. and HAYS, T., 2008. *In-depth interviewing: principles, techniques, analysis.* Pearson.

MITCHELL, R., GLEAVE, S., BARTLEY, M., WIGGINS, D. and JOSHI, H., 2000. Do attitude and area influence health? A multilevel approach to health inequalities. *Health & place,* **6**(2), pp. 67-79.

MOORE, S.E.H., 2008. Gender and the 'new paradigm'of health. *Sociology Compass,* **2**(1), pp. 268-280.

MORSE, J.M., NIEHAUS, L., WOLFE, R.R. and WILKINS, S., 2006. The role of the theoretical drive in maintaining validity in mixed-method research. *Qualitative Research in Psychology,* **3**(4), pp. 279-291.

MOUSTAKAS, C., 1994. *Phenomenological research methods.* Sage.

NATIONAL ASSEMBLY FOR WALES, 2001. *Tackling CHD in Wales: Implementing Through Evidence.* National Assembly for Wales, Cardiff.

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE (NICE), 2007. Secondary prevention in primary and secondary care for patients following a myocardial infarction. London: NICE.

NETTLETON, S., 1996. Women and the new paradigm of health and medicine. *Critical Social Policy,* **16**(48), pp. 33-53.

NEWMAN, S., 2004. Engaging patients in managing their cardiovascular health. *Heart,* **90**(suppl 4), pp. iv9-iv13.

NHS CENTRE FOR REVIEWS AND DISSEMINATION, 1998. *Effective Health Care and Cardiac Rehabilitation.* 4. University of York.

NHS FIFE CARDIAC REHABILITATION, 2011. *Cardiac Rehabilitation Report.* Kirkcaldy: NHS Fife.

NHS FIFE MANAGED CLINICAL NETWORK FOR CORONARY HEART DISEASE, 2008. *NHS Fife Coronary Heart Disease Strategy 2008 - 2013.* Report edn. Kirkcaldy: NHS Fife.

NHS UK, 2012-last update, Coronary heart disease introduction and overview [Homepage of NHS], [Online]. Available: http://www.nhs.uk/conditions/coronary-heart-disease/Pages/Introduction.aspx [22.08. 2013].

NIEMEIER, S., 2000. Straight from the heart–metonymic and metaphorical explorations. *Metaphor and metonymy at the crossroads: A cognitive perspective*, pp. 195-211.

OAKLEY, A., 1972. Sex, gender and society. London: Temple Smith.

O'BRIEN, R., HUNT, K. and HART, G., 2005. 'It's caveman stuff, but that is to a certain extent how guys still operate': men's accounts of masculinity and help seeking. *Social science & medicine,* **61**(3), pp. 503-516.

O'BRIEN, R., HART, G. and HUNT, K., 2007. "Standing out from the herd": men renegotiating masculinity in relation to their experience of illness. *International Journal of Men's Health,* **6**(3), pp. 178-200.

O'DONNELL, S., CONDELL, S. and BEGLEY, C.M., 2004. 'Add women & stir'—the biomedical approach to cardiac research! *European Journal of Cardiovascular Nursing,* **3**(2), pp. 119-127.

OGLETHORPE, M., 2002. *Review of Coal Industry and Related Museum Collections in Scotland.* Edinburgh: Royal Commision on Ancient and Historical Monuments of Scotland.

PARAHOO, K., 2006. *Nursing research: principles, process and issues.* Palgrave Macmillan.

PARFITT, J., 2005. Questionnaire Design and Sampling. In: R. FLOWERDEW and D. MARTIN, eds, *Methods in Human Geography. A guide for students doing a research project.* 2nd edn. England: Pearson Education, pp. 78.

PARSONS, T., 1951. Illness and the role of the physician: a sociological perspective. *American Journal of Orthopsychiatry,* **21**(3), pp. 452-460.

PATTENDEN, J., WATT, I., LEWIN, R.J. and STANFORD, N., 2002. Decision making processes in people with symptoms of acute myocardial infarction: qualitative study. *British medical journal,* **324**(7344), pp. 1006.

PEACHER, R.K., 1995. *The experience of place. Knoxville.* University of Tennessee Press.

PELL, J.P., PELL, A.C.H., NORRIE, J., FORD, I., COBBE, S.M. and HART, J.T., 2000. Effect of socioeconomic deprivation on waiting time for cardiac surgery: retrospective cohort studyCommentary: Three decades of the inverse care law. *BMJ,* **320**(7226), pp. 15-19.

PELL, J., PELL, A., MORRISON, C., BLATCHFORD, O. and DARGIE, H., 1996. Retrospective study of influence of deprivation on uptake of cardiac rehabilitation. *British medical journal,* **313**(7052), pp. 267-268.

PELL, J. and MORRISON, C., 1998. Factors associated with low attendance at cardiac rehabilitation. *British Journal of Cardiology,* **5**(3), pp. 152-155.

PETERSEN, A. and LUPTON, D., 1996. *The new public health: Health and self in the age of risk.* Sage.

PETRIE, K.J., CAMERON, L.D., ELLIS, C.J., BUICK, D. and WEINMAN, J., 2002. Changing illness perceptions after myocardial infarction: an early intervention randomized controlled trial. *Psychosomatic medicine,* **64**(4), pp. 580.

PETRIE, K.J., WEINMAN, J., SHARPE, N. and BUCKLEY, J., 1996. Role of patients' view of their illness in predicting return to work and functioning after myocardial infarction: longitudinal study. *British Medical Journal,* **312**(7040), pp. 1191.

PHILLIMORE, P.R. and MORRIS, D., 1991. Discrepant legacies: premature mortality in two industrial towns. *Social science & medicine,* **33**(2), pp. 139-152.

PHILLIMORE, P., 1993. How do places shape health? Rethinking locality and lifestyle in North-East England. In PLATT, S., THOMAS, H., SCOTT, S. and WILLIAMS, G. eds. *Locating health: sociological and historical explorations.* Ashgate Publishing.

PHILLIMORE, P., BEATTIE, A. and TOWNSEND, P., 1994. Widening inequality of health in northern England, 1981-91. *British medical journal,* **308**(6937), pp. 1125-1128.

PHILPOTT, S., BOYNTON, P.M., FEDER, G. and HEMINGWAY, H., 2001. Gender differences in descriptions of angina symptoms and health problems immediately prior to angiography: the ACRE study. *Social science & medicine,* **52**(10), pp. 1565-1575.

PICKETT, K. and PEARL, M., 2001. Multilevel analyses of neighbourhood socioeconomic context and health outcomes: a critical review. *British medical journal,* **55**(2), pp. 111-122.

PIERRET, J. and RADLEY, A., 1993. Constructing discourses about health and their social determinants. *Worlds of illness: Biographical and cultural perspectives on health and disease,* pp. 9-26.

PLATT, S., THOMAS, H., SCOTT, S. and WILLIAMS, G. eds. 1993. *Locating health: sociological and historical explorations.* Ashgate Publishing.

POLLARD, T.M., 1999. Sex, gender and cardiovascular disease. *Sex, gender and health,* pp. 53-74.

POPAY, J., BENNETT, S., THOMAS, C., WILLIAMS, G., GATRELL, A. and BOSTOCK, L., 2003. Beyond 'beer, fags, egg and chips'? Exploring lay understandings of social inequalities in health. *Sociology of health & illness,* **25**(1), pp. 1-23.

POPAY J., & GROVES, K. (2000). 'Narrative' in research on gender inequalities in health. In: E. ANNANDALE and K. HUNT, eds, *Gender inequalities in health.* Buckingham: Open University Press, pp. 64.

POPAY, J., THOMAS, C., WILLIAMS, G., BENNETT, S., GATRELL, A. and BOSTOCK, L., 2003. A proper place to live: health inequalities, agency and the normative dimensions of space. *Social science & medicine,* **57**(1), pp. 55-69.

POPAY, J. and WILLIAMS, G., 1996. Public health research and lay knowledge. *Social science & medicine,* **42**(5), pp. 759-768.

POPAY, J., WILLIAMS, G., THOMAS, C. and GATRELL, A., 2005. Theorising inequalities in health. *Medical Sociology: Major Themes in Health and Social Welfare,* **20**(5), pp. 356.

POPAY, J., WILLIAMS, G., THOMAS, C. and GATRELL, T., 1998. Theorising Inequalities in Health: The Place of Lay Knowledge. *Sociology of health & illness,* **20**(5), pp. 619-644.

POWER, R., 2008. "After the Black Gold": A View of Mining Heritage from Coalfield Areas in Britain. *Folklore,* **119**(2), pp. 160-181.

RAINE, R., BLACK, N., BOWKER, T. and WOOD, D., 2002. Gender differences in the management and outcome of patients with acute coronary artery disease. *Journal of epidemiology and community health,* **56**(10), pp. 791-797.

RAMM, C., ROBINSON, S. and SHARPE, N., 2001. Factors determining non-attendance at a cardiac rehabilitation programme following myocardial infarction. *New Zealand Medical Journal,* **114** (1132), pp. 227- 229.

RAPHAEL, D., 2008. Getting serious about the social determinants of health: new directions for public health workers. *Promotion & education,* **15**(3), pp. 15-20.

RASSIN, M., 2009. The cardiac patient: a gender comparison via illness narratives. *Journal of nursing and healthcare of chronic illness,* **1**(1), pp. 20-28.

REES, K., VICTORY, J., BESWICK, A., TURNER, S., GRIEBSCH, I., TAYLOR, F., TAYLOR, R., WEST, R., BURKE, M. and BROWN, J., 2005. Cardiac rehabilitation in the UK: uptake among under-represented groups. *British medical journal,* **91**(3), pp. 375-376.

RICHARDS, H., REID, M. and WATT, G., 2001. Why do men and women respond differently to chest pain? A qualitative study. *Journal of the American Medical Women's Association,* **57**(2), pp. 79-81.

RISBERG, G., HAMBERG, K. and JOHANSSON, E., 2006. Gender perspective in medicine: a vital part of medical scientific rationality. A useful model for comprehending structures and hierarchies within medical science. *BMC medicine,* **4**(1), pp. 20.

RIVA, M., TERASHIMA, M., CURTIS, S., SHUCKSMITH, J. and CARLEBACH, S., 2011. Coalfield health effects: variation in health across former coalfield areas in England. *Health & place,* **17**(2), pp. 588-597.

ROBERTSON, S., 2006. 'I've been like a coiled spring this last week': embodied masculinity and health. *Sociology of health & illness,* **28**(4), pp. 433-456.

ROBERTSON, S., SHEIKH, K. and MOORE, A., 2010. Embodied masculinities in the context of cardiac rehabilitation. *Sociology of health & illness,* **32**(5), pp. 695-710.

RUSTON, A. and CLAYTON, J., 2002. Coronary heart disease: Women's assessment of risk--a qualitative study. *Health, Risk & Society,* **4**(2), pp. 125-137.

SALE, J.E.M., LOHFELD, L.H. and BRAZIL, K., 2002. Revisiting the quantitative-qualitative debate: implications for mixed-methods research. *Quality and Quantity,* **36**(1), pp. 43-53.

SALTONSTALL, R., 1993. Healthy bodies, social bodies: men's and women's concepts and practices of health in everyday life. *Social science & medicine,* **36**(1), pp. 7-14.

SCARBOROUGH, P. and WEISSBERG, P., 2011. *Trends in coronary heart disease, 1961-2011.* British Heart Foundation.

SCHOENBERG, N.E., PETERS, J.C. and DREW, E.M., 2003. Unraveling the mysteries of timing: women's perceptions about time to treatment for cardiac symptoms. *Social science & medicine,* **56**(2), pp. 271-284.

SCHWARTZ, S., 1994. The Fallacy of the Ecological Fallacy: The Potential Misuse of a Concept and the Consequences. *American Journal of Public Health,* **84**(5), pp. 819 - 824.

SCOTTISH EXECUTIVE, 2006. *Scottish Index of Multiple Deprivation 2006: General report.* Edinburgh: Scottish Executive.

SCOTTISH GOVERNMENT, 2010. *The Scottish Health Survey: The Glasgow Effect.* Edinburgh: Scottish Government.

SCOTTISH INTERCOLLEGIATE GUIDELINES NETWORK (SIGN), 2002. *Cardiac Rehabilitation, A National Clinical Guideline.* 57. Scottish Intercollegiate Guidelines Network (SIGN), Edinburgh.

SEIDLER, V., 1989. *Rediscovering Masculinity: Reason, Language and Sexuality.* London: Routledge.

SEYMOUR, W., 1998. *Remaking the body: Rehabilitation and change.* Psychology Press.

SHAW, M., DORLING, D., GORDON, D. and SMITH, G.D., 2001. Putting time, person and place together: the temporal, social and spatial accumulation of health inequality. *Critical Public Health,* **11**(4), pp. 289-304.

SHAW, M., DORLING, D. and MITCHELL, R., 2002. *Health, place, and society.* Pearson Education.

SHEWRY, M.,C., SMITH WCS, WOODWARD M and TUNSTALL-PEDOE H., 1992. Variation in coronary risk factors by social status: results from the Scottish heart health study. British Journal of General Practice, 42, pp. 406-410.

SHILDRICK, M., 1997. *Leaky bodies and boundaries: Feminism, postmodernism and (bio) ethics*. Routledge.

SHILLING, C., 2003. *The Body and Social Theory.* Sage.

SJÖSTRÖM-STRAND, A. and FRIDLUND, B., 2008. Women's descriptions of symptoms and delay reasons in seeking medical care at the time of a first myocardial infarction: a qualitative study. *International journal of nursing studies,* **45**(7), pp. 1003-1010.

SLOGGETT, A. and JOSHI, H., 1994. Higher mortality in deprived areas: community or personal disadvantage? *British Medical Journal,* **309**(6967), pp. 1470-1474.

SMITH, G.D., HART, C., WATT, G., HOLE, D. and HAWTHORNE, V., 1998. Individual social class, area-based deprivation, cardiovascular disease risk factors, and mortality: the Renfrew and Paisley Study. *Journal of epidemiology and community health,* **52**(6), pp. 399-405.

SMITH, J.A., BRAUNACK-MAYER, A., WITTERT, G. and WARIN, M., 2007. "I've been independent for so damn long!": Independence, masculinity and aging in a help seeking context. *Journal of Aging Studies,* **21**(4), pp. 325-335.

SMITH, G.D., HART, C., WATT, G., HOLE, D. and HAWTHORNE, V., 1998. Individual social class, area-based deprivation, cardiovascular disease risk factors, and mortality: the Renfrew and Paisley Study. Journal of epidemiology and community health, 52(6), pp. 399-405.

SMITH, W., KENICER, M., TUNSTALL-PEDOE, H., CLARK, E. and CROMBIE, I., 1990. Prevalence of coronary heart disease in Scotland: Scottish Heart Health Study. *British Heart journal,* **64**(5), pp. 295-298.

SMITH, W.C., SHEWRY, M.C., TUNSTALL-PEDOE, H., CROMBIE, I.K. and TAVENDALE, R., 1990. Cardiovascular disease in Edinburgh and north Glasgow--a tale of two cities. *Journal of clinical epidemiology,* **43**(7), pp. 637-643.

STRAUSS, A.L., 1987. *Qualitative analysis for social scientists.* Cambridge University Press.

SUBRAMANIAN, S. and KAWACHI, I., 2006. Being well and doing well: on the importance of income for health. *International Journal of Social Welfare,* **15**, pp. S13-S22.

SZRETER, S., 2004. Industrialization and health. *British medical bulletin,* **69**(1), pp. 75-86.

SZRETER, S., 2003. The population health approach in historical perspective. *American Journal of Public Health,* **93**(3), pp. 421-431.

SZRETER, S., 1997. Economic growth, disruption, deprivation, disease, and death: on the importance of the politics of public health for development. *Population and Development Review,* , pp. 693-728.

TASHAKKORI, A. and TEDDLIE, C., 2003. *Handbook of mixed methods in social & behavioral research.* Sage.

TASHAKKORI, A. and TEDDLIE, C., 1998. *Mixed methodology: Combining qualitative and quantitative approaches.* Sage.

THE INDUSTRIES OF SCOTLAND: Linen and Jute Manufacturers 2011-last update [Homepage of electricscotland.com], [Online]. Available: http://www.electricscotland.com/history/industrial/industry10.htm [13.06. 2013].

TEDDLIE, C. and TASHAKKORI, A., 2006. A general typology of research designs featuring mixed methods. *Research in the Schools,* **13**(1), pp. 12-28.

THE FRAMINGHAM HEART STUDY, 04.23.12, 2012-last update, The Framingham Heart Study: History of the Framingham Heart Study [Homepage of Framingham Heart Study], [Online]. Available: http://www.framinghamheartstudy.org/about/history.html [02.05, 2012].

THE WORLD HEALTH ORGANIZATION MONICA PROJECT, 1994. Ecological Analysis of the Association between Mortality and Major Risk Factors of Cardiovascular Disease. *International journal of epidemiology,* **23**(3), pp. 505-516.

THOMPSON, D. and BOWMAN, G., 1997. Evidence for the effectiveness of cardiac rehabilitation. *Clinical Effectiveness in Nursing,* **1**(2), pp. 64-74.

TINKER, A., 2001. Ethics committees-help or hindrance? *Generations Review,* **11**(3), pp. 11-12.

TOBIN, B., 2000. Getting back to normal: women's recovery after a myocardial infarction. *Canadian Journal of Cardiovascular Nursing,* **11**(2), pp. 11-19.

TOD, A., 2008. Exploring the meaning of recovery following myocardial infarction. *Nursing standard (Royal College of Nursing (Great Britain) : 1987),* **23**(3), pp. 35-42.

TOD, A.M., READ, C., LACEY, A. and ABBOTT, J., 2001. Barriers to uptake of services for coronary heart disease: qualitative study. *British medical journal,* **323**(7306), pp. 214.

TOD, A., LACEY, E. and MCNEILL, F., 2002. 'I'm still waiting...': barriers to accessing cardiac rehabilitation services. *Journal of advanced nursing,* **40**(4), pp. 421-431.

TOOMBS, S.K., 1993. *The meaning of illness: A phenomenological account of the different perspectives of physician and patient.* Springer.

TOOMBS, S.K., 1988. Illness and the paradigm of lived body. *Theoretical medicine and bioethics,* **9**(2), pp. 201-226.

TREASURY, H., Department of Health (2002) *Tackling Health Inequalities: Summary of the 2002 Cross-Cutting Review*. London: Department of Health Publications.

TUAN, Y.F., 1977. *Place and Space: The perspective of experience.* Minnesota: University of Minnesota Press.

TUNSTALL, H., SHAW, M. and DORLING, D., 2004. Places and health. *Journal of epidemiology and community health,* **58**(1), pp. 6-10.

TUNSTALL-PEDOE, H. and WORLD HEALTH ORGANIZATION, 2003. WHO MONICA Project. *MONICA Monograph and Multimedia Sourcebook. World's Largest Study of Heart Disease, Stroke, Risk Factors, and Population Trends 1979-2002.* WHO.

TUNSTALL-PEDOE, H., KUULASMAA, K., AMOUYEL, P., ARVEILER, D., RAJAKANGAS, A. and PAJAK, A., 1994. Myocardial infarction and coronary deaths in the World Health Organization MONICA Project. Registration procedures, event rates, and case-fatality rates in 38 populations from 21 countries in four continents. Circulation, 90(1), pp. 583-612.

TURNER, B.S., 1996. *The body and society: explorations in social theory.* Sage.

UNAL, B., CRITCHLEY, J.A. and CAPEWELL, S., 2004. Explaining the Decline in Coronary Heart Disease Mortality in England and Wales Between 1981 and 2000. *Circulation,* **109**(9), pp. 1101-1107.

UNIVERSITY OF ST ANDREWS, 2012-last update, Kingdom of Industry: Coal [Homepage of University of St Andrews Museum], [Online]. Available: http://www.st-andrews.ac.uk/~kingdom/coal.html [14.06. 2013].

UNIVERSITY OF ST ANDREWS, 2012-last update, Kingdom of Industry: Fishing [Homepage of University of St Andrews Museum], [Online]. Available: http://www.st-andrews.ac.uk/~kingdom/fishing.html [13.06. 2013].

UNIVERSITY OF ST ANDREWS, 2012-last update, Kingdom of Industry: Linoleum [Homepage of University of St Andrews Museum], [Online]. Available: http://www.st-andrews.ac.uk/~kingdom/lino.html [13.06. 2013].

VALENTINE, G., 2001. *Social geographies: space and society.* Addison-Wesley Longman Ltd.

VAN HAM, M., MANLEY, D., BAILEY, N., SIMPSON, L. and MACLENNAN, D., 2012. *Neighbourhood effects research: new perspectives.* Springer.

VEENSTRA, G., 2007. Social space, social class and Bourdieu: Health inequalities in British Columbia, Canada. *Health & place,* **13**(1), pp. 14-31.

WAKEFIELD, S. and MCMULLAN, C., 2005. Healing in places of decline:(re) imagining everyday landscapes in Hamilton, Ontario. *Health & place,* **11**(4), pp. 299-312.

WALSH, D., TAULBUT, M. and HANLON, P., 2010. The aftershock of deindustrialization—trends in mortality in Scotland and other parts of post-industrial Europe. *The European Journal of Public Health,* **20**(1), pp. 58-64.

WALSH, J.C., LYNCH, M., MURPHY, A.W. and DALY, K., 2004. Factors influencing the decision to seek treatment for symptoms of acute myocardial infarction: an evaluation of the Self-Regulatory Model of illness behaviour. *Journal of psychosomatic research,* **56**(1), pp. 67-73.

WEST, C. and ZIMMERMAN, D.H., 1987. Doing gender. *Gender & Society,* **1**(2), pp. 125-151.

WHITAKER, S., BALDWIN, T., TAHIR, M., CHOUDHRY, O., SENIOR, A. and GREENFIELD, S., 2012. Public knowledge of the symptoms of myocardial infarction: a street survey in Birmingham, England. *Family practice,* **29**(2), pp. 168-173.

WHITE A, J., M., 2000. Men making sense of their chest pain- niggles, doubts and denials. *Journal of Clinical Nursing,* **9**, pp. 534 - 541.

WHITE, A., 1999. 'I feel a fraud': men and their experiences of acute admission following chest pain. *Nursing in Critical Care,* **4**, pp. 67 - 73.

WHITE, A.K. and JOHNSON, M., 2001. Men making sense of their chest pain–niggles, doubts and denials. *Journal of Clinical Nursing,* **9**(4), pp. 534-541.

WHITE, J., HUNTER, M. and HOLTTUM, S., 2007. How do women experience myocardial infarction? A qualitative exploration of illness perceptions, adjustment and coping. *Psychology, Health & Medicine,* **12**(3), pp. 278-288.

WILES, R., 1998. Patients' perceptions of their heart attack and recovery: the influence of epidemiological" evidence" and personal experience. *Social science & medicine,* **46**(11), pp. 1477-1486.

WILES, R. and KINMONTH, A.L., 2001. Patients' understandings of heart attack: implications for prevention of recurrence. *Patient Education and Counselling,* **44**(2), pp. 161-169.

WILKINSON, R.G. and PICKETT, K.E., 2006. Income inequality and population health: a review and explanation of the evidence. *Social science & medicine,* **62**(7), pp. 1768-1784.

WILLIAMS, G., 1984. The genesis of chronic illness: narrative re‐construction. *Sociology of health & illness,* **6**(2), pp. 175-200.

WILLIAMS, R., ROBERTSON, S. and HEWISON, A., 2009. Men's health, inequalities and policy: contradictions, masculinities and public health in England. *Critical Public Health,* **19**(3-4), pp. 475-488.

WILLIAMS, S., 2000. Chronic illness as biographical disruption or biographical disruption as chronic illness? Reflections on a core concept. *Sociology of health & illness,* **22**(1), pp. 40-67.

WILLIAMS, S.J., 1999. Is anybody there? Critical realism, chronic illness and the disability debate. *Sociology of health & illness,* **21**(6), pp. 797-819.

WILLIAMS, S.J., 1995. Theorising class, health and lifestyles: can Bourdieu help us? *Sociology of health & illness,* **17**(5), pp. 577-604.

WORLD HEALTH ORGANISATION, 2012-last update, The top ten causes of death [Homepage of WHO], [Online]. Available: http://www.who.int/mediacentre/factsheets/fs310/en/index.html [19.07. 2012].

WYER SJ, EARL L, JOSEPH S and HARRISON J., 2001. Deciding whether to attend a cardiac rehabilitation programme: an interpretative phenomenological analysis. *Coronary Health Care,* **5**(4), pp. 178-188.

YUSUF, S., HAWKEN, S., ÔUNPUU, S., DANS, T., AVEZUM, A., LANAS, F., MCQUEEN, M., BUDAJ, A., PAIS, P. and VARIGOS, J., 2004. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *The Lancet,* **364**(9438), pp. 937-952.

ZERWIC, J.J., RYAN, C.J., DEVON, H.A. and DRELL, M.J., 2003. Treatment seeking for acute myocardial infarction symptoms: differences in delay across sex and race. *Nursing research,* **52**(3), pp. 159-167.

## Appendix 1 UTREC (ethics) approval letter

University of St Andrews

University Teaching and Research Ethics Committee

22/02/2010
Sarah McGarrol

Geography and Geosciences

| | |
|---|---|
| **Ethics Reference No:** *Please quote this ref on all correspondence* | **GG6158** |
| **Project Title:** | Exploring and understanding factors which influence patient engagement and attendance at cardiac rehabilitation programmes in NHS Fife |
| **Researchers Name(s):** | SARAH MCGARROL |
| **Supervisor(s):** | **Paul Boyle** |

Thank you for submitting your application which was considered at the School Ethics Committee meeting. The following documents were reviewed:

| | |
|---|---|
| 1. Ethical Application Form | 14/01/10 |
| 2.Participant Information Sheet | 14/01/10 |
| 3. Consent Form | 14/01/10 |

The University Teaching and Research Ethics Committee (UTREC) approves this study from an ethical point of view. Please note that where approval is given by a School Ethics Committee that committee is part of UTREC and is delegated to act for UTREC.

Approval is given for three years. Projects, which have not commenced within two years of original approval, must be re-submitted to your School Ethics Committee.

You must inform your School Ethics Committee when the research has been completed. If you are unable to complete your research within the 3 three year validation period, you will be required to write to your School Ethics Committee and to UTREC (where approval was given by UTREC) to request an extension or you will need to re-apply.

Any serious adverse events or significant change which occurs in connection with this study and/or which may alter its ethical consideration, must be reported immediately to the School Ethics Committee, and an Ethical Amendment Form submitted where appropriate.

Approval is given on the understanding that the 'Guidelines for Ethical Research Practice' (http://www.st- andrews.ac.uk/media/UTRECguidelines%20Feb%2008 .pdf) are adhered to.

Yours sincerely

Convenor of the School Ethics Committee

Ccs
Supervisor
School Ethics Committee

UTREC Convenor, Mansefield, 3 St Mary's Place, St Andrews, KY16 9UY
Email: utrec@st-andrews.ac.uk Tel: 01334 462866
The University of St Andrews is a charity registered in Scotland: No SC013532

## Appendix 2 NHS Ethics approval letter

NHS Fife NHS Forth Valley NHS Tayside

*East of Scotland Research Ethics Service*

Tayside Committee on Medical Research Ethics B
Research Ethics Office
Tayside Academic Health Sciences Centre
Ninewells Hospital & Medical School
Residency Block, Level 3
George Pirie Way
Dundee
DD1 9SY

Miss Sarah McGarrol
PhD researcher
School of Geography and Geosciences
Irvine building
University of St Andrews
KY16 9AL

Date: 18 May 2011
Your Ref:
Our Ref: LR/DL/09/S1402/41
Enquiries to: Mrs Lorraine Reilly
Extension: Ninewells extension 40399
Direct Line: 01382 740399
Email: Lorraine.reilly@nhs.net

Dear Miss McGarrol

**Study title:** **Exploring and understanding factors which influence patient engagement and attendance at cardiac rehabilitation programmes in NHS Fife**

**REC reference:** **09/S1402/41**

This study was given a favourable ethical opinion by the Committee on 23 September 2009

It is a condition of approval by the Research Ethics Committee that the Chief Investigator should submit a progress report for the study 12 months after the date on which the favourable opinion was given, and then annually thereafter. To date, the Committee has not yet received the annual progress report for the study, which was due on 22 September 2010. It would be appreciated if you could complete and submit the report.

Guidance on progress reports and a copy of the standard NRES progress report form is available from the National Research Ethics Service website.

The NRES website also provides guidance on declaring the end of the study.

*09/S1402/41:* *Please quote this number on all correspondence*

Yours sincerely

**Mrs Diane Leonard**
**Administrative Assistant**

E-mail: diane.leonard@nhs.net

Copy to: NHS Fife R&D Office

# Appendix 3 Letter of Access

**HR Directorate**

Directorate of Human Resources
Hayfield House
Hayfield Road
KIRKCALDY
KY2 5AH
Tel 01592 643355
Fax 01592 648088

NHS Fife

**Private & Confidential**

Miss Sarah McGarrol
School of Geography & Geosciences
University of St Andrews
ST ANDREWS

| | |
|---|---|
| Date | 27 January 2010 |
| Your Ref | |
| Our Ref | DB/DB |
| Enquiries to | Donna Band |
| Extension | 8693 |
| Direct Line | 01592 643355 ext 8693 |
| Email: | donnaband@fife-pct.scot.nhs.uk |

Dear Miss McGarrol

**Letter of access for research**
**"Exploring and understanding factors which influence patient engagement and attendance at cardiac rehabilitation programmes in NHS Fife"**
**Ethics Ref No - 09/S1402/41**

This letter confirms your right of access to conduct research through NHS Fife for the purpose and on the terms and conditions set out below. This right of access commences on 27 January 2010 and ends on 31 December 2010 unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. We understand that a formal letter of approval has already been issued by Dr Gordon Birnie on 27 November 2009 giving permission to conduct the project in NHS Fife. The information supplied about your role in research at NHS Fife has been reviewed and you do not require an honorary research contract with this NHS organisation. We are satisfied that such pre-engagement checks as we consider necessary have been carried out. You are not entitled to any form of payment or access to other benefits provided by this NHS organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through NHS Fife, you will remain accountable to St Andrew's University, but you are required to follow the reasonable instructions of Dr Mark Francis, Consultant Cardiologist in this NHS organisation or those given on his behalf in relation to the terms of this right of access. Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings. You must act in accordance with NHS Fife policies and procedures, which are available to you upon request, and the Research Governance Framework. You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times.

## Appendix 4 Letter of invitation for patient participants

University of St Andrews

School of Geography and Geosciences

Dear Sir/Madam

**Title of project: Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.**

As a patient who has recently been admitted to hospital for a heart problem and who will be eligible for participation at cardiac rehabilitation to help you in your recovery, I am writing to invite you to participate in the above study.

This study is focussed on how a variety of demographic (age, gender, occupation, socio-economic), socio-cultural (area and characteristics of place of residence), psychological (attitudes, beliefs and behaviours to health) and geographical (distance to and location of healthcare services) factors and others can combine and influence patient attendance at cardiac rehabilitation services in NHS Fife.

The study is qualitative in nature, employing interview methods for data collection and is interested in exploring your personal views about these factors which may influence and impact on your attendance at cardiac rehabilitation. Interviews will take place with you, if you agree to participate, at a convenient location and at a time to suit you. In addition, NHS staff who are involved in cardiac rehabilitation services, are also being approached to take part.

**The research study is being conducted in part fulfilment of a PhD degree award at the University of St Andrews.**

To help you decide whether you would be prepared to participate, an information sheet has been attached which provides greater detail on the study. Please feel free to discuss this with your family, friends or healthcare worker. I am also available to answer any questions you may have at the number below.

Thank you for taking the time to consider your participation.

Yours sincerely,

Sarah McGarrol

Miss Sarah McGarrol, School of Geography and Geosciences, Irvine Building, University of St Andrews, North Street, St Andrews, KY16 9AL
sm846@st-andrews.ac.uk

letter of invitation: patient v1 19.08.09

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

## Appendix 5 Information sheet for patient participants

University of St Andrews

School of Geography and Geosciences

**PATIENT PARTICIPANT INFORMATION SHEET**

This information is designed to give you more information about the research project we would like you to take part in. It is yours to keep.

Study title: **Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.**

**Introduction**
You are being invited to take part in a research study being conducted in part fulfilment of a PhD degree award at the University of St Andrews. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

**What is the purpose of the study?**
The purpose of this study is to understand how a variety of factors can influence patient attendance at cardiac rehabilitation services. It is known that the four phases of cardiac rehabilitation (CR) can help patients recover and improve their health following a cardiac event, such as a heart attack. It is also known that there are different rates of attendance between and within health board areas for CR, due to a variety of reasons. These issues may affect patient's ability to attend in a number of ways, making attendance either more or less likely. Reasons such as age, gender, socioeconomic status, social and cultural influences, psychological and geographical issues can combine to influence patient attendance at cardiac rehabilitation services. It is the aim of this research to explore through qualitative in-depth interviews with patients in NHS Fife, how some of these complex factors may promote or hinder attendance with cardiac rehabilitation services.
The findings from this research will help inform NHS Fife policy around cardiac rehabilitation services. This study will last for 9 months and is part of a Managed Clinical Network for Coronary Heart Disease, NHS Fife funded PhD.

**Why have I been chosen?**
The research is aiming to recruit patients at Phase 1 (when in hospital following a heart attack) from the Coronary Care Unit at Victoria Hospital and to conduct qualitative interviews during Phase 3 (approximately 6-8 weeks after hospital discharge) with 60 patients.
You have been chosen as a possible participant in this study as you have recently been admitted to the CCU at Victoria Hospital, Kirkcaldy and are eligible for cardiac rehabilitation. We will be recruiting all patients who are admitted with a heart attack and

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

## Appendix 6 Consent form for patient participants

University of St Andrews

School of Geography and Geosciences

Patient Identification number for this study:
Name of Researcher: SARAH McGARROL

PATIENT CONSENT FORM

**Title of project: Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.**

| | Please initial box |
|---|---|
| 1. I confirm that I have read and understood the information sheet dated..... (version.....) for the above study. I have had the opportunity to consider the information and ask questions and have had these answered satisfactorily. | ☐ |
| 2. I understand that my participation is voluntary and I am free to withdraw at any time, without giving any reason. | ☐ |
| 3. I agree to my GP being informed of my participation in this study. | ☐ |
| 4. I agree to my interview being audio recorded. | ☐ |
| 5. I agree to take part in the above study. | |
| 6. I agree to provide contact details (including phone number) in order for the researcher, Sarah McGarrol, to be able to contact me. | ☐ |

please write here:

| Name of participant | Date | Signature |
|---|---|---|
| | | |

| Name of person taking consent | Date | Signature |
|---|---|---|
| | | |

When complete: 1 copy for patient; 1 for researcher site file; 1 (original) to be kept in medical notes
Consent form: patient engagement with cardiac rehab v1 14.08.09

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

## Appendix 7 Letter of invitation for staff participants

University of St Andrews

School of Geography and Geosciences

Dear Sir/Madam

**Title of project: Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.**

As a healthcare professional working with coronary heart disease patients I am writing to invite you to participate in the above research study.

This study is focussed on how a variety of demographic (age, gender, occupation, socio-economic), socio-cultural (area and characteristics of place of residence), psychological (attitudes, beliefs and behaviours to health) and geographical (distance to and location of healthcare services) factors interrelate and can influence patient attendance at cardiac rehabilitation services in NHS Fife.

As a healthcare professional working in NHS Fife, you will have experienced how a number of these complex factors may impact on patients and their healthcare needs. The study is qualitative in nature, employing interview methods for data collection and is interested in exploring your professional perspectives, experiences and views about these factors and how they can impact on patients' engagement and attendance at cardiac rehabilitation services. The research will not be evaluative and will not focus on your clinical decision making or practice. Interviews with NHS staff will take place during normal, daily working times. In addition, patients who are involved in cardiac rehabilitation are also being approached to take part.

**The research study is being conducted in part fulfilment of a PhD degree award at the University of St Andrews.**

To help you decide whether you would be prepared to participate, an information sheet has been attached which provides greater detail on the study. I am also available to discuss informally any questions you may have before reaching your decision on the contact below

Thank you for taking the time to consider your participation.

Yours sincerely,

Sarah McGarrol

School of Geography and Geosciences, Irvine Building, University of St Andrews, North Street, St Andrews, KY16 9AL
sm846@st-andrews.ac.uk
Letter of invitation: staff v1 19.08.09

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

## Appendix 8 Information sheet for staff participants

University of St Andrews

School of Geography and Geosciences

**STAFF PARTICIPANT INFORMATION SHEET**

This information is designed to give you more information about the research project we would like you to take part in. It is yours to keep.

Study title: Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.

**Introduction**
You are being invited to take part in a research study being conducted in part fulfilment of a PhD degree award at the University of St Andrews. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

**What is the purpose of the study?**
The purpose of this study is to understand how a variety of factors can influence patient attendance at cardiac rehabilitation services. It is known that the four phases of cardiac rehabilitation (CR) can help patients recover and improve their health following a cardiac event, such as a heart attack. It is also known that there are different rates of attendance between and within health board areas for CR, due to a variety of reasons. These issues may affect a patient's ability to attend in a number of ways, making attendance either more or less likely. Reasons such as age, gender, socioeconomic status, social and cultural influences, psychological and geographical issues can combine to influence patient attendance at cardiac rehabilitation services

**Why have I been chosen?**
As an NHS staff member involved in organising, delivering and developing services for coronary heart disease patients in NHS Fife and who has had experience of cardiac rehabilitation, it is important to understand and explore your views about the issues which you perceive facilitate or impede patient attendance at cardiac rehabilitation services. Your expertise and perspectives about these issues are important to understand and will provide insights from a professional perspective into some of the complex factors affecting patient attendance.

**Do I have to take part?**
No. Your participation is entirely voluntary. It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you are interested in taking part please complete the tear off form and return in the stamped addressed envelope provided to Sarah McGarrol.

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

## Appendix 9 Consent form for staff participants

University of St Andrews

School of Geography and Geosciences

Staff Identification number for this study:
Name of Researcher: SARAH McGARROL

STAFF CONSENT FORM

**Title of project: Exploring and Understanding Factors which Influence Patient Engagement and Attendance at Cardiac Rehabilitation Programmes in NHS Fife.**

| | Please initial box |
|---|---|
| 1. I confirm that I have read and understood the information sheet dated ..... version (....) for the above study. I have had the opportunity to consider the information and ask questions and have had these answered satisfactorily. | ☐ |
| 2. I understand that my participation is voluntary and I am free to withdraw at any time, without giving any reason. | ☐ |
| 3. I agree to take part in the above study and consent to my interview being recorded. | ☐ |
| 4. I agree to take part in the above study but do not wish the interview to be recorded. | ☐ |

| | | |
|---|---|---|
| _____ | _____ | _____ |
| Name of participant | Date | Signature |
| _____ | _____ | _____ |
| Name of person taking consent | Date | Signature |

When complete: 1 copy for staff member; 1 for researcher site file
Staff consent form : patient engagement with cardiac rehab staff v1 14.08.09

Irvine Building, North Street, St Andrews, Fife KY16 9AL, Scotland, UK
Tel: 01334 462894 Fax: 01334 463949 Email: gg@st-andrews.ac.uk

# Appendix 10 Participant pseudonyms and demographic information

PARTICIPANT PROFILES

| | Pseudonym | age | area | attender | non attender | location name | time at address | marital status |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | **BRUCE** | 69 | MD | √ | | kirkcaldy | 5 years | married |
| 2 | **ALISTAIR** | 81 | NMA | √ | | dunfermline | 30 years | widowed |
| 3 | **KEITH** | 47 | MD | | √ | crossgates | 17 years | married |
| 4 | **ISAAC** | 56 | NMD | | √ | glenrothes | 6 years | married |
| 5 | **WALTER** | 67 | MD | | √ | cardenden | 5 years | married |
| 6 | **RALPH** | 56 | MD | | √ | east wemyss | 18 years | married |
| 7 | **JASON** | 48 | NMD | √ | | glenrothes | 14 years | married |
| 8 | **SAMUEL** | 64 | NMD | √ | | glenrothes | 35 years | married |
| 9 | **JAMES** | 77 | NMA | | √ | freuchie | 19 years | widowed |
| 10 | **FERGUS** | 61 | MD | | √ | methil | 30 years | widowed |
| 11 | **HELEN** | 66 | MD | | √ | lochgelly | 19 years | married |
| 12 | **DANIEL** | 74 | NMA | | √ | kirkcaldy | 35 years | married |
| 13 | **ELSPETH** | 73 | NMD | | √ | glenrothes | 30 years | widowed |
| 14 | **LAURA** | 58 | MD | | √ | buckhaven | 22 years | married |
| 15 | **GAVIN** | 60 | MD | | √ | kirkcaldy | 14 months | married |
| 16 | **VIVIAN** | 54 | NMA | √ | | dalgety bay | 9 years | married |
| 17 | **PETER** | 58 | NMA | √ | | dunfermline | 3.5 years | married |
| 18 | **LAURIE** | 59 | NMA | | √ | dunfermline | 2 years | married |
| 19 | **PAUL** | 62 | NMA | √ | | kennoway | 10 years | married |
| 20 | **PHILIP** | 66 | NMA | √ | | star of markinch | 22 years | married |
| 21 | **RAY** | 60 | MD | √ | | methil | 5 years | married |
| 22 | **WILSON** | 49 | MD | √ | | methilhill | 7 years | married |
| 23 | **MALCOLM** | 61 | NMD | √ | | dunfermline | 8 years | single |
| 24 | **CELIA** | 57 | MD | | √ | cowdenbeath | 22 years | married |
| 25 | **WILFRED** | 69 | MD | √ | | cowdenbeath | 42 years | married |

PARTICIPANT PROFILES

| | Pseudonym | age | area | attender | non attender | location name | time at address | marital status |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 26 | **JACK** | 66 | NMA | √ | | kingskettle | 13 years | married |
| 27 | **BILL** | 49 | NMD | | √ | glenrothes | 13 years | married |
| 28 | **LENA** | 62 | NMD | | √ | glenrothes | 28 years | married |
| 29 | **ANDREW** | 76 | MD | | √ | kinglassie | 30 years | divorced |
| 30 | **DEREK** | 64 | NMD | √ | | glenrothes | 26 years | married |
| 31 | **ADAM** | 44 | NMA | | √ | dalgety bay | 4 years | married |
| 32 | **REG** | 74 | NMD | | √ | glenrothes | 9 years | married |
| 33 | **WILLIE** | 76 | NMD | √ | | glenrothes | 10 years | married |
| 34 | **JOE** | 74 | NMD | | √ | glenrothes | 27 years | married |
| 35 | **WINSTON** | 67 | NMA | | √ | upper largo | 14 years | married |
| 36 | **CHRISTOPHER** | 57 | NMA | √ | | markinch | 11 years | married |
| 37 | **CAROL** | 75 | MD | √ | | methil | 49 years | widowed |
| 38 | **GREG** | 48 | MD | √ | | buckhaven | 18 years | married |
| 39 | **IVAN** | 68 | MD | √ | | kinglassie | 21 years | separated |
| 40 | **JUNE** | 50 | NMD | | √ | glenrothes | 26 years | married |
| 41 | **NEIL** | 69 | NMD | | √ | glenrothes | 5 months | divorced |
| 42 | **DONALD** | 74 | NMD | | √ | glenrothes | 43 years | married |
| 43 | **ADA** | 66 | NMA | | √ | leslie | 5 years | widowed |
| 44 | **ALISON** | 64 | NMD | √ | | glenrothes | 39 years | married |
| 45 | **DOUGLAS** | 74 | NMA | | √ | aberdour | 5 years | married |
| 46 | **ALBERT** | 54 | NMA | √ | | dunfermline | 19 years | married |
| 47 | **ALEC** | 73 | NMA | √ | | rosyth | 30 years | married |
| 48 | **JUDE** | 66 | NMA | | √ | leslie | 45 years | widowed |
| 49 | **HAMISH** | 77 | NMA | | √ | Lundin Links | 10 years | married |
| 50 | **MAUREEN** | 68 | MD | √ | | kirkcaldy | 4 years | married |

PARTICIPANT PROFILES

| | Pseudonym | economic position | Job classification | Date of heart attack | Date of interview | stent | deceased |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1 | **BRUCE** | in work | 7 | 10/12/2009 | 04/03/2010 | √ | |
| 2 | **ALISTAIR** | retired | 2 | 27/12/2009 | 08/03/2010 | | |
| 3 | **KEITH** | in work | 3 | 14/12/2009 | 08/03/2010 | √ | |
| 4 | **ISAAC** | out of work | 5 | 19/12/2009 | 09/03/2010 | √ | |
| 5 | **WALTER** | retired | 8 | 14/01/2010 | 09/03/2010 | | |
| 6 | **RALPH** | in work | 5 | 20/12/2009 | 10/03/2010 | | |
| 7 | **JASON** | permanently sick | 8 | 26/12/2009 | 10/03/2010 | | |
| 8 | **SAMUEL** | in work | 5 | 19/12/2009 | 15/03/2010 | | |
| 9 | **JAMES** | retired | 8 | 27/12/2009 | 30/03/2010 | | |
| 10 | **FERGUS** | other (off sick self employed) | 5 | 13/12/2009 | 30/03/2010 | | |
| 11 | **HELEN** | retired | 8 | 26/12/2009 | 31/03/2010 | | |
| 12 | **DANIEL** | retired | 2 | 01/01/2010 | 31/03/2010 | | |
| 13 | **ELSPETH** | retired | 6 | 25/12/2009 | 01/04/2010 | | YES 14/08/10 |
| 14 | **LAURA** | permanently sick | 6 | 06/01/2010 | 26/04/2010 | | |
| 15 | **GAVIN** | permanently sick | 8 | 01/02/2010 | 26/04/2010 | | |
| 16 | **VIVIAN** | in work | 4 | 05/01/2010 | 27/04/2010 | √ | |
| 17 | **PETER** | in work | 7 | 18/01/2010 | 27/04/2010 | √ | |
| 18 | **LAURIE** | out of work | 2 | 04/01/2010 | 27/04/2010 | √ | |
| 19 | **PAUL** | other (off sick self employed) | 5 | 17/01/2010 | 28/04/2010 | | |
| 20 | **PHILIP** | retired | 1 | 10/01/2010 | 28/04/2010 | √ | |
| 21 | **RAY** | in work | 1 | 15/01/2010 | 29/04/2010 | | |
| 22 | **WILSON** | in work | 5 | 02/01/2010 | 29/04/2010 | | |
| 23 | **MALCOLM** | retired | 5 | 22/01/2010 | 04/05/2010 | | |
| 24 | **CELIA** | out of work | 8 | 10/01/2010 | 04/05/2010 | | |
| 25 | **WILFRED** | retired | 5 | 27/01/2010 | 17/05/2010 | | |

PARTICIPANT PROFILES

| | Pseudonym | economic position | Job classification | Date of heart attack | Date of interview | stent | deceased |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 26 | **JACK** | retired | 1 | 29/01/2010 | 17/05/2010 | √ | |
| 27 | **BILL** | permanently sick | 8 | 14/03/2010 | 31/05/2010 | | |
| 28 | **LENA** | in work | 4 | 01/03/2010 | 31/05/2010 | √ | YES 09/05/11 |
| 29 | **ANDREW** | retired | 2 | 12/02/2010 | 31/05/2010 | | YES 31/07/10 |
| 30 | **DEREK** | in work | 8 | 21/03/2010 | 22/06/2010 | √ | |
| 31 | **ADAM** | in work | 1 | 15/03/2010 | 22/06/2010 | | |
| 32 | **REG** | retired | 5 | 01/03/2010 | 22/06/2010 | | |
| 33 | **WILLIE** | retired | 8 | 14/03/2010 | 23/06/2010 | | |
| 34 | **JOE** | retired | 5 | 31/03/2010 | 23/06/2010 | √ | |
| 35 | **WINSTON** | retired | 5 | 23/03/2010 | 23/06/2010 | | |
| 36 | **CHRISTOPHER** | in work | 9 | 11/03/2010 | 25/06/2010 | | |
| 37 | **CAROL** | retired | 8 | 31/01/2010 | 06/07/2010 | | |
| 38 | **GREG** | in work | 3 | 24/04/2010 | 06/07/2010 | √ | |
| 39 | **IVAN** | retired | 3 | 13/03/2010 | 06/07/2010 | | |
| 40 | **JUNE** | out of work | 9 | 24/04/2010 | 12/07/2010 | √ | |
| 41 | **NEIL** | retired | 2 | 08/04/2010 | 12/07/2010 | | |
| 42 | **DONALD** | retired | 5 | 23/03/2010 | 12/07/2010 | | |
| 43 | **ADA** | retired | 6 | 02/04/2010 | 13/07/2010 | | |
| 44 | **ALISON** | retired | 3 | 11/03/2010 | 13/07/2010 | | |
| 45 | **DOUGLAS** | retired | 1 | 01/04/2010 | 15/07/2010 | | YES 17/08/2011 |
| 46 | **ALBERT** | in work | 2 | 01/04/2010 | 15/07/2010 | √ | |
| 47 | **ALEC** | retired | 5 | 01/04/2010 | 15/07/2010 | | |
| 48 | **JUDE** | retired | 8 | 31/03/2010 | 26/07/2010 | √ | |
| 49 | **HAMISH** | retired | 3 | 19/04/2010 | 26/07/2010 | √ | |
| 50 | **MAUREEN** | retired | 6 | 23/02/2010 | 26/07/2010 | | |

## Appendix 11 Pseudonyms for cardiac rehabilitation staff

Staff were recruited through the Managed Clinical Network for Coronary Heart Disease in NHS Fife and after the initial contacts were made, further contacts were obtained from these personal recommendations. All staff were contacted and many were involved in formal and informal discussions throughout the process of the PhD aiding the research design and process. Eight cardiac rehabilitation staff were interviewed as part of this research and were responsible in different ways for commissioning, organising, delivering and developing cardiac rehabilitation services for coronary heart disease patients in NHS Fife.

Due to the high probability of identifying cardiac rehabilitation staff, their specific job roles within cardiac rehabilitation are not identified and they have been given pseudonyms to ensure their anonymity and protect their identities. These pseudonyms are used throughout the thesis and are as follows:

- Veronica
- Dawn
- Mhairi
- Joan
- Alice
- Fay
- Matthew
- Laura

## Appendix 12 Interview schedule: staff participants

**Background questions**

Can you describe your employment role in relation to CHD services and in particular for CR?

How long have you been employed in your current post?

How long have you worked for the NHS?

What do you most enjoy about your job?

What do you most dislike about your job?

**Cardiac rehabilitation – general**

Can you describe how cardiac rehabilitation works in NHS Fife? E.g. what is the procedure after a patient has had a heart problem

What does cardiac rehabilitation mean to you?

Do you think cardiac rehabilitation is effective for patients' health? If so, why?

In which ways do you think cardiac rehabilitation is not effective?

How do you think cardiac rehabilitation will change during the next 5 years? In which ways?

**Cardiac rehabilitation – attenders**

How does NHS Fife define patient attendance at CR?

In your opinion, what are the characteristics of patients who attend cardiac rehab? Is there an attender type?

What are the mains things which influence attendance in your opinion?

**Cardiac rehabilitation – non-attenders**

How does NHS Fife define patient non attendance at CR?

In your opinion, what are the characteristics of patients who don't attend cardiac rehabilitation? Is there a non- attender type?

What are the main things which influence non attendance in your opinion?

Do you have any ideas why people don't attend?

- Social /cultural issues
- Practical issues

- Motivational/behavioural issues

How would you try to improve attendance at cardiac rehab?
Are there any service changes which could be made to address this non-attendance?

**Area issues**

Do you think there are places in Fife which you would describe as 'unhealthy' ? If so, which areas and what are your reasons for this.

Are there places in Fife which are 'healthier'? If so, which areas and what are your reasons for this?

How do people from these different areas mentioned above view their health, do you think?

Are there differences in attitudes and behaviours to health from people from different areas in Fife?

Do you think this may have an impact on cardiac rehabilitation?

In your opinion, what might the reasons be for these differences in attitudes and behaviours?

**Reflections**

Are there any other issues you'd like to mention?
Do you think any other questions should be asked?

**Thank you for your time**

## Appendix 13 Interview schedule: patient participants

### Demographic questions for NHS Fife Cardiac Rehabilitation Patients
### Part 1

**Study number:**

**Date of birth:**

**1) Age:**

**2) Gender:** male [ ] female [ ]

**3) Marital status:**

| | | | |
|---|---|---|---|
| single | [ ] | married/civil partner | [ ] |
| divorced/resolved partnership | [ ] | separated | [ ] |
| widowed | [ ] | | |

**4) Ethnicity:**

| | | | |
|---|---|---|---|
| White British | [ ] | White Irish | [ ] |
| White & Black Caribbean | [ ] | White & Black African | [ ] |
| White & Asian | [ ] | Indian | [ ] |
| Pakistani | [ ] | Bangladeshi | [ ] |
| Caribbean | [ ] | African | [ ] |
| Other | [ ] | | |

**5) Economic position:**

| | | | |
|---|---|---|---|
| In work | [ ] | Out of work | [ ] |
| Permanently sick | [ ] | Student | [ ] |
| Retired | [ ] | Other | [ ] |
| Looking after home/family | [ ] | Please specify _____ | |

**6) Description of job**: Title, type and place of work (current and previous and duration)

**7) Education:**

| | | | |
|---|---|---|---|
| O grade/S grade | [ ] | Higher grade | [ ] |
| GSVQ/SVQ level 1/ City & guilds | [ ] | GSVQ/SVQ level 2/City & Guilds | |
| HNC/HND or equivalent | [ ] | First degree | [ ] |
| Higher degree | [ ] | | |
| Professional qualification (eg. Teaching, accountancy) | | | [ ] |
| None of these | | | [ ] |

**8) Household accommodation:** Owns outright [ ] Own with mortgage/loan [ ]
Shared ownership [ ] Rents from council [ ]
Rents from Housing association or similar [ ]
Private landlord/letting agency [ ]
Rent free [ ] Other [ ]

9) Do you own a car?

10) Do you have access to a car?

11) Who lives with you in your home?

12) Do you look after or care for someone at present? Who? For how long each day?

13) How long have you lived at this address?

**14) Health history:**

Date of hospitalisation (recent heart problem):

Length of hospital stay (in days):

Previous heart disease history:

Other health problems:

**Interview schedule for NHS Fife Cardiac Rehabilitation Patients**

**Part 2**

**1) Introductory questions**

- Could you tell me a little bit about yourself?
- What do you like to do - your main hobbies and entertainment? – DIY, TV, Radio, Cinema, Bingo
- Can you tell me what sorts of things do you do in an average week?

**2) Features of the area**

- How long have you lived in this area?
- Do you like living here?
- How would you describe your area to someone not familiar with it?
- What are the good and bad things about this area?
- What facilities are there? such as shops, leisure facilities - parks, services – post offices, banks, doctor surgeries, pubs, social clubs
- Do you use these facilities frequently?
- Do you think your area has better facilities than other places? Why, why not?

**3) Culture of the area**

- Do you think people are healthy in your area?
- Can you tell me what types of people live in your area? Are they similar or different to you?
- Do you think this area is distinctive from other areas in Fife? Eg is it a mining area/manufacturing area/agricultural area

- Are there similarities or differences between people in this area compared to another area?
- Do you think these differences or similarities may have something to do with the history of this area and the people here?
- Would you consider this a 'healthy' or 'unhealthy' area? Why/why not?

**4) Health/ill health questions – beliefs and behaviour**

- How have you been feeling since your recent heart problem?
- What do you understand by the term 'lifestyle'
- What kind of lifestyle do you have now?
- How does it differ from before your heart attack?
- How would you rate your diet?
- Level of activity?
- Do you smoke any cigarettes or tobacco?
- Do you drink alcohol? At home, social club/pub?
- Does members of your family share the same lifestyle as you?

---

**<u>Illness perception questionnaire</u>**

1. **How much does your illness affect your life? –** in which ways?

   0 (no affect)1 2 3 4 5 6 7 8 9 10 (severely affects my life)

2. **How long do you think your illness will continue?**

   0 (a very short time)1 2 3 4 5 6 7 8 9 10 (forever)

3. **How much control do you feel you have over your illness?**

   0 (absolutely no control)1 2 3 4 5 6 7 8 9 10 (extreme control)

4. **How much do you think your treatment can help your illness?**

   0 (not at all)1 2 3 4 5 6 7 8 9 10 (extremely helpful)

5. **How much do you experience symptoms from your illness –**is it managed well?

   0 (no symptoms)1 2 3 4 5 6 7 8 9 10 (many severe symptoms)

6. **How concerned are you about your illness?**

   0 (not at all)1 2 3 4 5 6 7 8 9 10 (extremely concerned)

7. **How well do you feel you understand your illness?**

   0 (don't understand at all)1 2 3 4 5 6 7 8 9 10 (understand v clearly)

8. **How much does your illness affect you emotionally? (e.g does it make you angry, scared, upset or depressed?)**

   0 (not at all affected emotionally)1 2 3 4 5 6 7 8 9 10 (extremely affected emotionally)

   **Please list in rank order the three most important factors that you believe caused your illness.**

   1)

   2)

   3)

---

- Why do you think you had a heart attack?
- Did you think you were at risk of a heart attack before you had one?
- Do other people you know eg your family or friends have heart problems?
- Do you think heart problems are inherited?
- Have you made any changes to your health since your recent heart attack? – behavioural/risk factors

- Do you think you're going to have any barriers to maintaining some of these changes over however long or is it now just part of your life?

**5) Cardiac rehabilitation questions**

- Are you doing cardiac rehabilitation?

**Cardiac rehabilitation – <u>those attending</u>**

- What does cardiac rehabilitation mean to you?
- Have you enjoyed it?
- What has influenced you attending CR? – beliefs/attitudes/family/time to get there/encouragement etc
- What concerns, if any, did/ do you have about this programme?
- Do you find it easy to go to the classes? Eg timing of classes, location of classes?
- In which ways will CR help you do you think?
- Is it good to meet other people who are in a similar situation to you?
- Do you find the staff supportive and encouraging at CR?
- Is there anything you would change about the CR sessions?
- Are there any challenges you face with your rehabilitation?
- Do you think other people in your area attend CR if they have heart problems?

**Cardiac rehabilitation – <u>those NOT attending</u>**

- What does cardiac rehabilitation mean to you?
- What did you not continue going?
- Did you have concerns about cardiac rehab before you went?
- Did you have health visitors (Phase 2) come to visit you after you were in hospital?
- Did they inform you about the next Phase of cardiac rehab? (Phase 3)

- If not class available at present, will you get in touch with them soon to find out when next class is?
- Did you get any information from the nurse – booklets, a manual?
- What has been the main influences of you NOT attending – beliefs/attitudes/family/time/other commitments/lack of encouragement/enthusiasm/travel/money
- Have your family said anything about you attending CR?
- Did you find the staff unsupportive or not encouraging?
- What might have encouraged you to attend?

## Appendix 14 Participant occupation categories

The job descriptions given by participants were coded into nine main occupational groupings named Standard Occupational Category codes devised by the Office for National Statistics. Table 8 below shows the numbers of participants within each group. Column 2 outlines the current/most recent classification. Columns 3 and 4 stipulate the participant's current economic status at time of interview. deprivatio Appendix 18

Map of patient participant's locations and areas of deprivation, Fife

**Table 8 Occupation categories for participants**

| | Occupational category | Participants | Current status at time of interview | Current status at time of interview |
|---|---|---|---|---|
| 1 | **Managers, directors and senior officials** | 5 males | 3 retired | 2 in work |
| 2 | **Professional occupations** | 6 males | 4 retired | 1 in work; 1 out of work |
| 3 | **Associate professional and technical occupations** | 4 males; 1 female | 3 retired | 2 in work |
| 4 | **Administrative and secretarial occupations** | 2 females | | 2 in work |
| 5 | **Skilled trades occupations** | 13 males | 7 retired | 3 in work; 1 out of work; 2 off sick |
| 6 | **Caring, leisure and other service occupations** | 4 females | 3 retired | 1 permanently sick |
| 7 | **Sales and customer service occupations** | 2 males | | 2 in work |
| 8 | **Process, plant and machine operatives** | 8 males; 3 females | 6 retired | 1 in work; 1 out of work; 3 permanently sick |
| 9 | **Elementary occupations** | 1 male; 1 female | | 1 in work; 1 out of work |

**Appendix 15 Attendance at NHS Fife cardiac rehabilitation (2007): (NHS Fife, 2008)**